D3.6 - An interdisciplinary framework for comparisons and cross-fertilization strategies of MAZI pilots (version2)

Other

MAZI

ICT - Information and Communication Technologies

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The Open University	OU	United Kingdom
Slacktivist Limited	SPC	United Kingdom
INURA Zurich Institute	INURA	Switzerland
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Executive summary

The 1st version of this deliverable focused on framing and carrying out exercises of self-reflection across all MAZI pilots, which aimed to gather comparable knowledge of the respective partner's visions and anticipation of the pilot activities. This allowed us to draw comparisons that proved valuable as a starting point for the cross-fertilisation events, in which multiple partners met with the goal to work on the interdisciplinary aspects of MAZI as a project.

In this second version, we make one step further toward four directions:

a) we analyze the material included in D3.2 and D3.5 in light of further developments and interactions toward comparing the individual perspectives of partners on key concepts such as DIY networking, as well as the different pilot studies;

b) we describe and analyse the cross-fertilization events that took place during the first year and the initial lessons learned from them;

c) we try to capture the similarities and differences between the disciplinary perspectives of the academic partners; and

d) we identify important tensions between research and action as they have manifested during the cross-fertilization events of the first year.

Based on this material, we propose certain enhancements of our interdisciplinary framework, i.e., the deconstruction of the pilot studies into their core elements, the placement of MAZI toolkit as a boundary object between different subsets of actors in MAZI, and two self-reflection exercises to be carried out in the following months and to be documented in the Deliverable D3.11.

Table of Contents

1. Introduction

One of the key advantages and key challenges of MAZI at the same time is its diversity. The diversity of disciplinary perspectives on the concept of participation and design, among others, the diversity of pilot studies in terms of environment and profile of activists involved, and also the diversity of the possible form and content of its main outcome, MAZI toolkit.

To address and to productively deal with this diversity, we have established three parallel "threads" for structuring, analyzing, and evaluating our transdisciplinary work. Namely, the interdisciplinary comparative framework (D3.5-7), the pilot evaluation (D3.8-10), and the self-reflection exercise (D3.11-13). All these threads have as their starting point Deliverable 3.2, which introduces the key disciplinary perspectives, the initial approach of all members of the project to the MAZI objectives and approach, and establishes the MAZI toolkit as the "boundary object" of our transdisciplinary work.

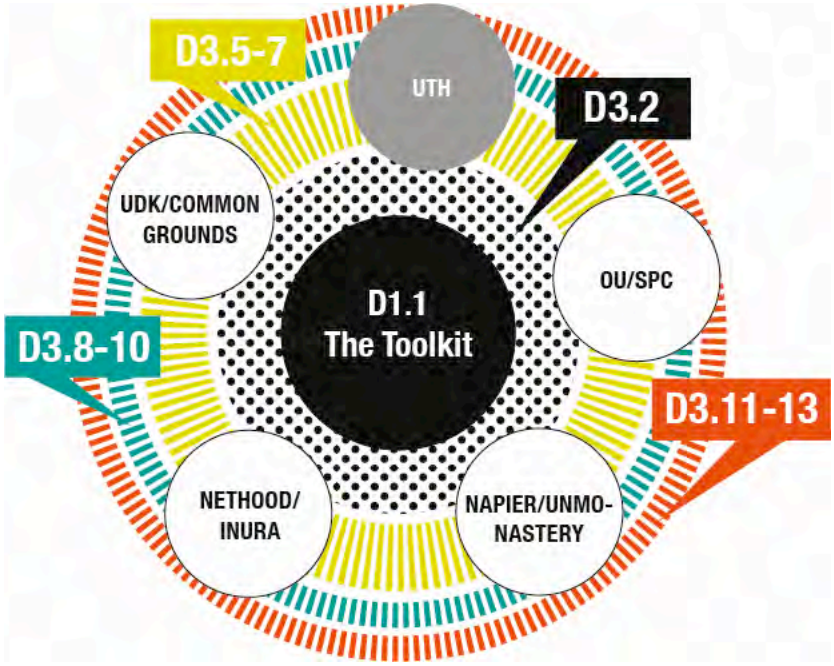

***Figure 1**: The different, interrelated instruments set up for structuring, analyzing and evaluating our transdisciplinary work: MAZI toolkit described in detail in D1.1. will be the concrete outcome of the project, a proper boundary object "sitting in the middle" between the different "social worlds" of the project represented by the "couples" of each the pilot study. Deliverables 3.2-4 document the integration process of finding a "common ground" between the different perspectives and make the required translation to the toolkit's "language" (i.e., list of functionalities, customization options, templates, guidelines, etc.). These different perspectives are being compared and analyzed through the comparative framework developed in Deliverables 3.5-7, evaluated through the evaluation framework developed in Deliverables 3.8-10, while the whole process of differentiation, comparison, evaluation, integration will be overlooked and documented in a self-reflective mode in Deliverables 11-13.*

These relationships are described in detail in Deliverables 3.2 and 3.5. This is the second deliverable on the "interdisciplinary comparative framework" thread, summarizing and analyzing the outcomes of the interactions that took place the first year of the project. With two of the pilots starting off, and after several related events, we are in a better position to structure the development of our interdisciplinary framework and the role of MAZI toolkit as the boundary object.

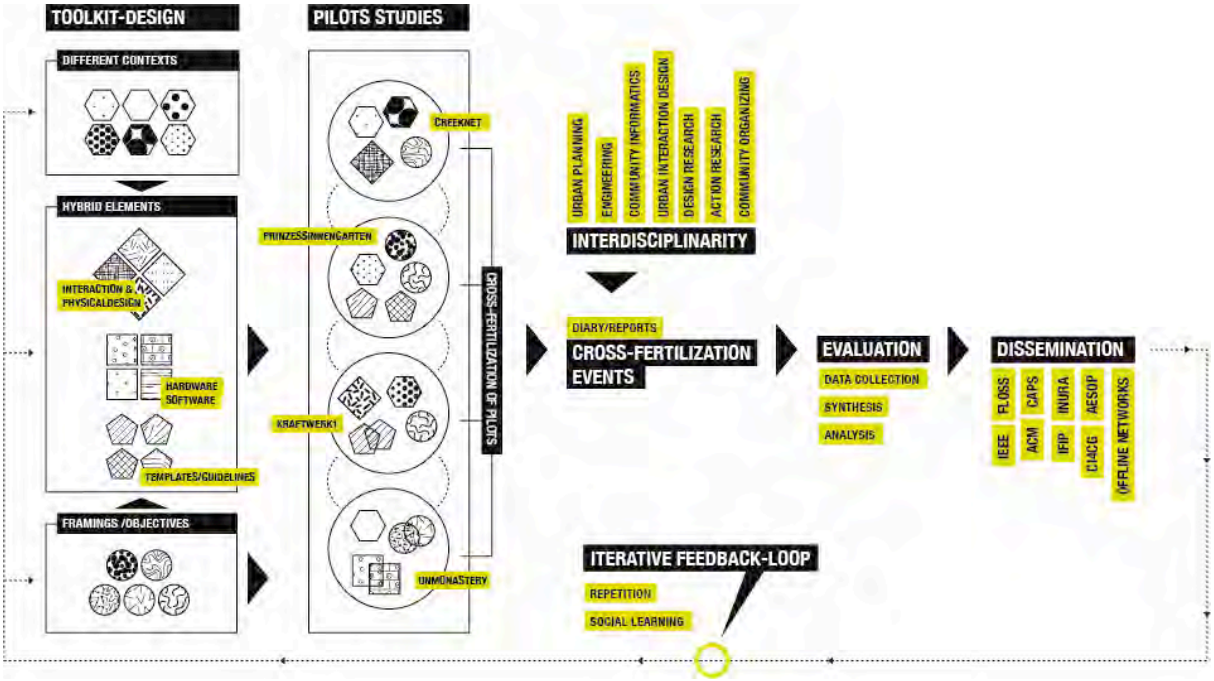

***Figure 2**: Each of the pilots consists of multiple variables, here described as contexts, hybrid elements and framings/objectives, that will evolve and change over time. Their combination and interplay are subject to planned experimentation within the four different pilots, in each of which a particular body of knowledge is being generated. This knowledge is being discussed, challenged and enriched with perspectives both out of the consortium as well as beyond the project boundaries.*

Although we are still in the phase of opening up to the multitude of existing perspectives without "constraints", we are also ready to formulate a concrete plan on how these diverse views and courses of action will manage to converge to a single output, MAZI toolkit and also allow for useful comparisons in the different "local domains". In other words, an interdisciplinary or better transdisciplinary framework, that will orchestrate the "back and forth" between familiarity and diversity, as described in D3.2.

This version of the deliverable may be understood as a different 'moment' of the transdisciplinary framework, which is itself a continuum that evolves while advancing with MAZI workplan. In this case, what was presented in the first version, is a **moment of practice**, and what we are elaborating in this report is rather a **conceptual moment of representations**. In the third and last version of the deliverable, the **lived moment of the interdisciplinary framework** will be presented through the project team members' stories --particularly on the MAZI toolkit-- of their personal and group experiences (e.g., intra-pilot or bilateral negotiations; consortium negotiations; "kaleidoscope" that refers changing 'frames' and points of view within mixed or smaller project groups).

We structure this deliverable in two parts. First, we summarize and analyze the actual content produced during the first year. More specifically,

a) the answers to the questionnaires included in previous deliverables **(Sections 2 & 3)**,

b) the development of the individual research agendas of the different academic partners captured in different documents produced **(Section 4)**,

c) the interactions that took place during the cross-fertilization events and most notably the Berlin workshop and INURA conference **(Section 5)**, and

d) the tensions that were revealed between the research and community actors in the project **(Section 6)**. Second, in **Section 7**, we describe certain enhancements of our interdisciplinary framework, which will help us inform the future work in MAZI.

2. Key concepts and individual perspectives

To understand the various perspectives of DIY networking within MAZI consortium, five months after the beginning of the NetHood research team formulated and sent out a series of questions to be answered by all members of MAZI consortium. The questions regard “what DIY networking is” for every respondent, also listing its main characteristics, capabilities and limitations; exploring its community impact and role as a catalyst, in theory and also through personal experiences of events organized around DIY networking. The answers as primary source of information are provided in MAZI Deliverable 3.2 (refer to Section 4). Below we present a synthetic classification of these answers in order to sketch a collective image of how an understanding of the concept’s complexity was built from the perspectives of this group of researchers and activists. This is our first attempt to create a series of surveys through, which to compile a shared vocabulary.

2.1 Understandings of DIY networking

Regarding the concept definition, and the identification of its characteristics and capabilities (D3.2. pp.25-29), first, there is a **technology-centered perspective** that defines DIY networking as “the appropriation of technology beyond the pre-designed solutions presented to customers by commercial providers” [...] “by productive “misuse” (customization) of off- the-shelf hardware”. DIY is when "someone acquires low cost, easy-to-find hardware components, not necessary open source, in order to build a network using open source software. The hardware components include small-sized computers, antennas, network modules etc, and it is generally easy to assemble it and install it, using custom methodologies". From this point of view, critical aspects of DIY networks come to the fore “the proximity/location based aspect”; “the possibly internet-independence of the networks”; “affordable, experimental, open, appropriable, slightly piraty”; “built from clearly labelled functional elements that are connected with easy to implement procedures without the help of an 'expert'”;; and again “low-cost, easy to find, easy to install”. DIY networks are resilient and could function where a central power source is not available and in remote regions.

Second, there is a **data/information exchange dimension** expressed through DIY being "easy to build, easy to manage system providing wireless access, which allow people to communicate through a network even in absence of a connection to the Internet"; “communication independent from enterprises”; its advantage in urban areas, for example, as its "ability to transfer large amounts of data in very short times, something that the internet still struggles with, especially in countries (several in Africa I can think of) where internet is charged by the megabyte", and in more generic terms, “DIY networking is the common provision of telecommunication tools, be it hardware be it software with purpose of independent exchange of information.”

Third, **the empowering “self”-production point of view** comes into the collective picture through affirmations like “A human centred approach to the provision of networks that aims to empower people by creating self build toolkits.” ... "Not assuming that someone else will best serve your network connectivity and entertainment streams then taking steps to understand how these systems work and self provide, iterate and move forward." … “A form of small-scale communication network, comprising software and hardware, that is purchased, installed and configured by an individual or small group of people, for their own use,” and there is emphasis on the adaptability and DIY networking’s closeness to the users’ needs.

Fourth, **the experimental dimension of technology** allowing for social innovation and addressing local needs, as “it can bring about tailored solutions, open spaces for experimentation and invention”, and DIY networking is “a particular type of approach to the way technology is used in a situation”, “the experimental application of networking technology for large scale (e.g. guify) and (mostly) small scale contexts. [...] one central parameter of DIY networking is the opportunity to design the interactions to be facilitated or mediated by ICT in novel ways that are not bound to the “naturalized” processes of communication designed and sold by very successful platforms such as facebook, twitter or the like.” … its adoption depends on the curiosity and interest in experimental formats.

Fifth, there is an extensive coverage of **the community organization perspective** that is included in more than half of the DIY networking definitions. This emphasizes the appropriateness of this topic in the broader context of the CAPS objectives, e.g. by ensuring social needs are met by placing them at the center of the research agenda.

On the one hand, the social aspects are presented in a complementary way to the technical aspects: "DIY networks are not only technical systems but also social systems: they rely on people, so are shaped by the participants' motivations, personal and political philosophies, and their goals and ambitions."; as well as "... normal networking allows individuals working together to form groups around communications infrastructure; DIY networking allows the opposite, communications infrastructure forms around groups."

In addition, there is a strong focus on the organization, management and control of the networking technology. "It perhaps differs from other types of technology only in terms of who controls it." ... "Communities taking ownership and control over the configuration of technology. Such DIY networks can be configured in such a way as to take into account the needs of the local community." … "It is a grassroots form of enabling connection and communication at the local level, which could be self-built, self-managed, self-governed and owned at the grassroots level in different forms (cooperation, association of individuals or groups etc); they make most of the community networks."

Along similar lines, (the most) important characteristics of DIY-networking are considered, "citizen control; built, implemented, and operated through participatory processes, strengthening community ties and a sense of ownership and independence from the profit-making commercial companies, materialized collective choices, satisfied (or not) individual preferences"; ... "the do-it-yourself component, community ownership and self-organization around technology. The DIY-aspect has to be put in context. Although it is practically possible to make and create these networks yourself, it is clear that a certain interest and digital literacy is explicitly needed. Community ownership of the networks is a vital counter-argument to commercial/ traditional digital networks. To assure longevity of the networks, self-organization around content management and maintenance should be vital for the network. Other aspects of DIY networks are the proximity/location based aspect as well as the possibly internet-independence of the networks."

Nevertheless, there are many **forms of collective organization** for the production and use of networking infrastructure, and thus understanding, what the DIY 'is', may mean to look also into what generates the different initiatives, or in other words, what "do" means, what "it" means and what "yourself" is about in every particular situation[1].

Considering the motivations in choosing the DIY networking infrastructure, it was noted that there is a wide variety as, for instance, one answer noted that the deployment of this type of technology depends on the level of (political) sensitivity toward the use/misuse of data and the commercialization of communication etc. To introduce DIY in practice, it is conveyed that it should always include an element of hand-on-workshop instead of having a theoretical focus, and rather than an add-on, be an added value to the actual work going on within that community. Depending on the group's objectives, however, there are many practical options, for example, "the setting up of such a network might be carried out wholly independently; with the support of other practitioners, or by paying for expert support. A network might operate completely independently of the Internet, or be complementary or subsidiary to networking capabilities provided by a commercial or government funded network provider. The network may be a small scale purposefully temporary art installation or a long term infrastructure initiative across a city or country."

From the definition of DIY networking, the questionnaire opened up the topic of limitations, as well as the ability of such infrastructures to play (or not) a catalyst role, and to have a significant impact on a community. Below we detail each of these aspects.

Among the **limitations of DIY networking** are listed (refer to D3.2 pp.28-29) digital literacy divide and the effort required by members of the community to develop the skills needed to create and maintain the DIY network, someone mentioning that DIY is related to "bugs, geeks, frustration". Also on the side of the non-savvy users there is sometimes skepticism, some degree of resistance, and "frustration at the slow rate of progress and the fear of missing out or falling behind the curve of innovation and understanding"; necessary long term commitment and engagement; less reliability than commercial products; overwhelming options from corporations; some specific technical requirements like no physical obstacles for antennas; and also geographical limitations as to assure people's proximity, with the consequence of improving the social links and slowly, over time, a suitable level of trust. Moreover, "in situations where we need reliability, sustainability, high computational power or high storage capacity, we can not rely on DIY networks."

[1] See Mark Gaved's blog on "DIY Networking?": http://www.open.ac.uk/blogs/MAZI/?p=17

To summarize **the role of DIY networking as a catalyst** (refer to D3.2 pp.26-27 & 29-34), first we mention some theoretical considerations to be taken into account, and then the connection with the real impact will be made by the reflections on practice, including references to an attended event, that have been expressed within the answers to the survey.

First, to be a catalyst, from one's point of view, the discussion about DIY networking should be reversed from "a particular type of technology" to a "concept", "method or approach". Based on practical experiments, an initiative might act as the catalyst "for reflection on the broader goals, purposes, and ambitions of the participants." While there are rational understandings expressed in terms of fulfilled purposes (e.g. "it may act as a catalyst, through the degree to which it successfully fulfils its purpose, or reveals other opportunities"), there is also awareness within the consortium that "needs can be produced or induced by the existence of possibilities," and that such initiatives inherently inspire confidence in other areas of life. It could also stimulate a sense of ownership and independence from the profit-making commercial companies, with high potential to strengthen the community links where some level of community ties already exist.

Two critical points were made with respect to a) managing expectations and b) keeping in mind the potential emergence of "unintended consequences such as marginalising already vulnerable groups, reinforcing current power structures or consuming resources that might have been better deployed elsewhere."

Second, on a rather practical level it could play the role of a catalyst on a spectrum ranging from communication and information sharing to empowerment and capacity building. On the one hand, it may provide data that can inform debates around a local issue; build awareness of the "relative information, energy and financial poverty"; create a hybrid space for gatherings, discussions and exchange of information; support production activities as well as educational activities. DIY networking could improve communication between strangers in proximity in ad hoc installations or temporary events like, for instance, becoming a broadcaster in an art exhibition setting, and facilitate individual as well as collective expression in hybrid space. It could add a playful effect to interactions and catch people's curiosity and imagination, and be appropriated for an unexpected use.

On the other hand, to avoid "a mere "performative" participation without real consequences", further experiments should explore the capabilities of DIY to empower (local) participating actors. There is evidence of the potential to bring together around DIY people, who have been loosely connected beforehand, either for spontaneous communication or for more sustained collaborations; certainly it may generate social interactions, in particular intergenerational connections, and also link different existing initiatives. At the same time it may become an enhancer of transparency, and develop capacity for further action.

Therefore, the **impact on community** that the implementation of DIY networking may have is related to the arguments brought in the above text with respect to its role as a community catalyst, and to the 'community organization perspective' in defining the concept. "At the core of the DIY philosophy are the development of skills and knowledge within the community. By taking ownership and responsibility for the creation, configuration and deployment of the network the aspiration is that this will stimulate participation within the community and better place the participants to take advantage of the other factors." In addition, it could enable critical reflection on broader community goals. As there is an opportunity to create a complementary model to the corporate one in the provision networking infrastructure, that may confer a new role to local communities as collective actors in the marketplace. However, there is expressed skepticism in the capacity of communities to compete with the commercial Internet providers, but rather complement them by addressing first the local needs.

As a general comment regarding the community of MAZI, it was noted that currently DIY networks seem to "sit like a mountain" between communities, or as a "boundary object" between disciplines; each discipline is still trying to describe and understand the concept from their own perspective, similarly to seeing only one side of the mountain and defining the mountain from this vantage point.

2.2 A possible boundary object

As a consequence, the survey proposed a second set of questions on the existing skills and interests within the consortium, which was meant to identify the different individual roles of MAZI team members, and how the boundary object may take shape through a collective understanding.

Regarding the consortium's pool of skills, which were defined through inquiry on the "topics mastered," the following areas of perceived expertise were mentioned, listed here as some sort of a spectrum of 'targets' for action, ranging from human centered design to network engineering:

- A human centred approach to interaction design;
- Design and innovation process, service design;
- Assessing social and political implications, as well as imagining scenarios for implementation are closer to my expertise;
- I feel comfortable discussing scenarios for implementation, political dimensions, social implications;
- I can talk with engineers and discuss best ways to solve a problem. Also, I am able to discuss the political, social and designerly implications of concepts around DIY networks with the respective communities;
- When working with groups, invest mostly in encouraging others to find a voice;
- Implementation, taking into account the political and social implications of the technology;
- Practitioner in DIY networking: set up own networked community. Academic researcher in DIY networking;
- the network engineering topics.

As for the related knowledge that interdisciplinary conversations and experiments may deepen, the list mentioned a series of sets of issues namely a) long-term perspectives on the topic, b) contextualization, c) building up technical skills and d) literature research.

a) Long-term perspectives on the topic
- Adaptability;
- The Physical design of a DIY deployment and in ways to build appealing, engaging DIY networks for citizens, which will not only be attractive to them but they will also manage to keep users connected to them;
- How to improve organisational aspects of networks and other entities like cooperatives;

b) Contextualization

- A better understanding of what constitutes the 'local' and the role that it plays in the lived experience;
- Contextual issues, research methodologies, evaluation techniques, goal setting etc;
- The contextualization of our common topic in the different areas of expertise and interest;

c) Building up technical skills

- Technical characteristics and applications, the motivations behind certain design choices, design reasoning and process thinking;
- My technological understanding and ability to create;
- Building applications (coding);

d) Literature research

- Different theoretical perspectives that might be employed to enable analysis and evaluation of DIY networking initiatives. … Broader understanding of the academic literature around the field;
- The smart-city discourse and the alternative narratives of this discourse.

To conclude, this first survey aimed to sketch out what the boundary object might be. In the next paragraph we summarize the identified topics that may be placed at the center of the interdisciplinary discussions (refer to D3.2 pp.34-35).

The topic of **applications** was considered critical. In general there is an interest on hands-on workshops and learning-by-doing, e.g. in training sessions, on specific case studies and with respect to a specific social context. Discussing **technical characteristics** is mentioned as being important in exploring possibilities and limitations, as well as releasing the 'fear' from technical issues through practical applications, so effective experimentation of 'how things work'. Imagining **scenarios for implementation** would help in understanding: a) what applications may be meaningful or useful, b) anticipating their appropriation by users, c) experiencing negotiation processes in bringing visions to reality, d) advancing the perception of 'needs' by spelling out possibilities. Conversations around the **political dimensions**, as a central topic in MAZI, may bring to light the potential affordances of DIY networking, on issues of independence, ownership, privacy of data; creating

awareness of the variations within the boundaries between the private and the public life, and building on the advantages of physical proximity and networked communication that are incorporated in the offline networks. Finally, structuring the discussions around **social implications**, that have been identified as being critical also in the paragraphs above, may encourage critical self-reflection on risks and possibilities toward building sustainable options for local engagement, resource sharing, capacity building, knowledge generation, and collective awareness.

3. Comparisons between pilots

In the first version D3.5 of the deliverable "An interdisciplinary framework for comparisons and cross-fertilization strategies of MAZI pilots", in Section 1.3 presenting the comparative method we wrote, "Many of the events and activities in MAZI are structured around [similar] conversations, more or less unsettling, that have the capability to uncover surprising findings and to stimulate creative and innovative further steps for action" (p.10); indeed the interdisciplinary framework is shaped over time with the help of such conversations, and among the collected discourses during the first year of MAZI are also the survey answers about the pilot process.

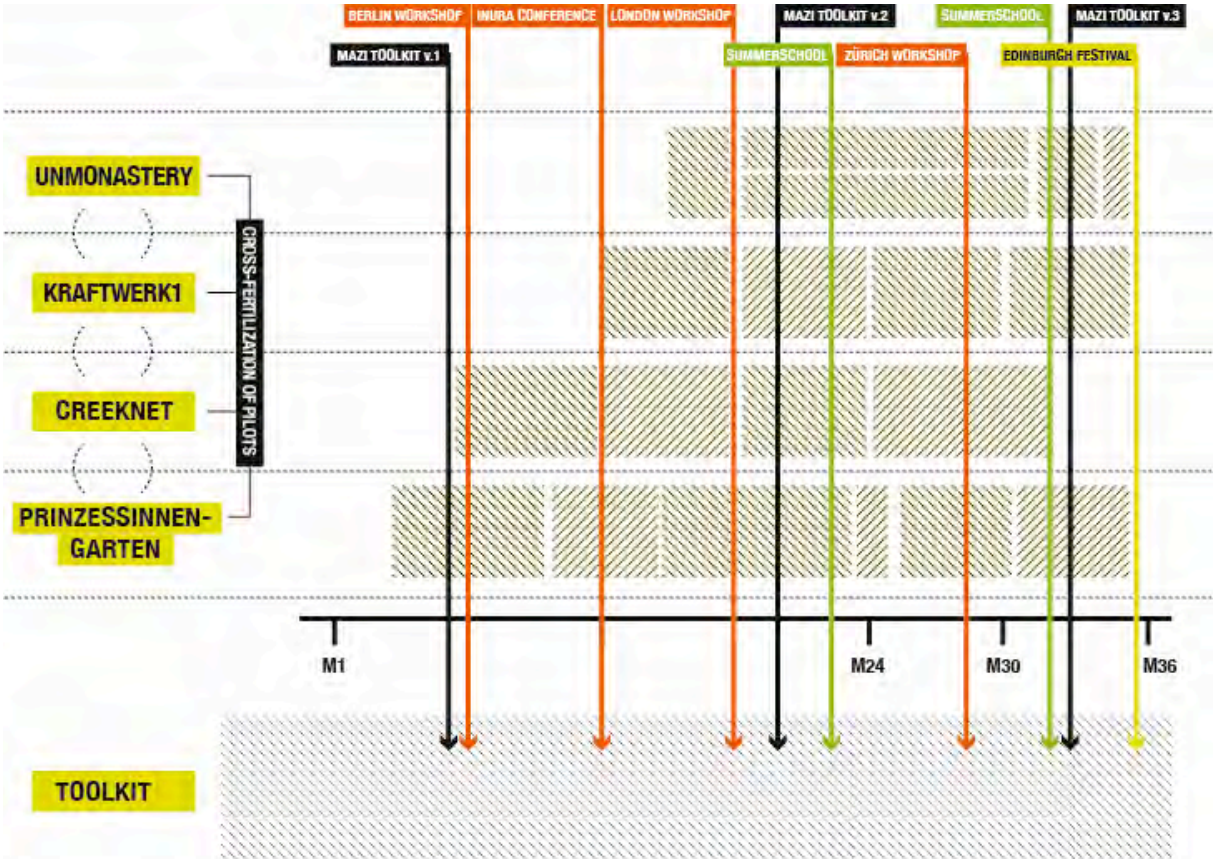

***Figure 3**: The four pilot studies unfold in a cascading manner. Numerous situations of cross-fertilization and exchange within MAZI have been scheduled*

In MAZI, we selected four cases (a small number, to refer to the conditions of the comparative method, see D3.5) that unfold in a cascading manner (see Figure 3), starting at different stages during the project duration. To continuously reflect, compare and share experiences across the pilot projects, there are scheduled a variety of overlappings either face-to-face interactions --taking place during the interdisciplinary meetings and the cross-fertilization events-- or such abstract 'meeting points' by means of answering questionnaires and then interpreting them in comparison.

Before proceeding with the narration though, we include a comparative description of the different pilots, informing the overall interdisciplinary framework (i.e., key concepts and comparison variables) that is a "new" version of the simple table included in the DoW.

The initial comparative table in the DoW:

Pilots/ Variables	OU/SPC CreekNet	UdK/CG Prinzessinnengarten	NetHood/INURA Kraftwerk1	NU/UM MakeSpace
Context	Urban neighbour-hood (1km radius)	Community garden at Berlin city core	Cooperative housing and living complex (~300 residents)	To be decided
Framing	Contact Information Discourse	Information Discourse	Knowledge	Contact Information Discourse Knowledge
Toolkit	Decision making P2P Shared storage	Content sharing	Knowledge production	Multiple modes
Actors	Pioneers Community champions	Community Neighbours Activists City officials	Community Catalyst	Artists Citizens
Duration	Long term Continuous	Long term Continuous	Long term Continuous	To be decided
Design process	Co-design workshops Liquid democracy Training	Co-design workshops Iterative prototyping	Deliberation	Critical Design Design Fictions Cultural Probes
Evaluation	Activity Content analysis Interviews Debriefing workshop	Activity Content analysis Interviews	Activity Interviews Continuous observation	Workshops Interviews
Phases	1. Community engagement 2. Implementation 3. Integration 4. Final trial	1. Framework co-design 2. Early prototyping 3. Information Base 4. Co-Creation of application 5. Synthesis & filtering 6. Public debate 7. Evaluation & dissemination	1.Observation 2.MAZI offering 3.Implementation and evaluation	1. Initiation and setup 2.Relationship building 3. Final Trial

Below we provide an updated view of the initial table for the two first pilots that have started in 2016, Berlin and Deptford.

Pilots/ Variables	OU/SPC CreekNet	UdK/CG Nachbarschafts-Akademie (NAk)
Context	Urban neighbourhood. Community networking organisation connecting a range of groups, individuals and organisations (social, environmental, cultural) defined by physical space and facing overlapping challenges due to rapidly changing built environment. Issues around gentrification, rights of access, environmental effects of development, continuity and evolution of cultural and environmental enterprises.	Hub/Meta-organisation, interconnecting different local communities of practice in Berlin. Aiming at synergizing the knowledge generated throughout the different forms of critical urban practice within the nexus of local and global exchange between urban and rural communities, commons, right to the city, bottom up socio-ecological transformation and self-organized learning.
Framing	**Contact:** The pilot as a boundary object to facilitate interactions across communities, and the development of tools with functionalities to support the building of relationships to enable collective action and responses to local challenges. **Information:** The pilot aims to provide tools that enable local groups to broadcast knowledge more widely; to provide an alternative channel for distribution of data; to promote their causes and to	**Discourse:** The pilot aims at creating tools that amplify the discussions about the future of public land in Berlin and beyond. **Knowledge:** The current prototype aims at the creation, annotation and broadcasting of knowledge about public land use and critical urban practice by actors deemed central by the NAk. **Information:** The pilot essentially aims at

	inform both long-term and new residents about the local area (historical,social, cultural,natural riches). **Discourse:** The pilot aims at creating and deploying tools that may inform and amplify discussions about the current and future use of the local landscape, and provide an independent voice to local communities.	fostering and opening the discourses already happening within the political landscape of urban initiatives in Berlin to a public. It does so partly by disseminating information.
Toolkit	• Boundary object between different initiatives and groups • Archiving knowledge/ shared storage • Community mapping • Environmental sensing • Broadcasting/ disseminating • Prompting interactions/ provoking discussion • Repository to enable further data reuse/repurposing	• Boundary object between the different initiatives • Knowledge production • Synthetization & centralization of content • Dissemination/Broadcasting • Prospective: Participation tool
Actors	Pioneers; community catalysts/organisers	Community catalysts/organizers
Duration	Long term/continuous; but some scenarios may also be temporary (duration dependent on specificities)	Long term/continuous
Design process	Participatory Action Research; community engagement, co-design, partial deployment and testing, training.	Co-design, iterative prototyping, partial deployment & testing
Evaluation	Activity Observation Interviews Surveys (Data Logging?) Debriefing workshop	Activity Observation Interviews
Phases	We are following the Phases described in the DoW but are having to respond to local conditions and timelines might be modified	We still follow the phases as originally described in the DoW, but updated them to the developments within the pilot study. For details please see D2.1.

In the comparative analyses we take into account key variables of MAZI pilots --meaning that they are capable to show differences-- while those similar like, say, "the limitations of DIY networking" are not kept central to the analysis. In the deliverable D3.5 the research team of each pilot responded to the initial 'catalogue of questions' meant to provide a structure for pilots' comparative analyses (see the answers in Section 3.6). Among such key variables are those under what the questionnaire labeled as the "community," for instance, the "community needs" identified until June 2016. Below we present these answers 'in the mirror', focusing on the first two pilots in Berlin and in London that have started during the first year of MAZI.

The **community needs** in the Berlin pilot were thought of in three dimensions:

1. as serving the community in place (e.g., knowledge hub/archive, tool for organization, material database),
2. as a tool for knowledge and content generation (e.g. research tool, collaboration tool), and
3. as an interface to the outside (e.g. to other initiatives, broader neighborhood, external workshops, to make the initiatives and their work more visible).

In the London pilot, the needs were formulated as:

1. engagement with local environment (wildlife, environmental conditions),

2. understanding of environmental conditions: concerns around Thames Tideway infrastructure project's environmental impact,

3. data as a resource for wider use, appropriation by a range of communities: data may be collected for one purposes then repurposes for use by others, e.g. environmental data then reused as a resource for generating art, and d) engagement of local and schools communities with Deptford Creek.

Then taking into account **the expectations that the local community has from MAZI**, the answer from the Berlin pilot stated, "There is an overall curiosity about MAZI and its potential as an added value for the community. A motivating effect has been the deep interest of the political approach of the project – community ownership of technological development, community owned data, DIY technology and self-organizations. These aspects have quickly been linked to the political visions of many of the initiatives when speaking of community owned housing, self-sufficiency and community organizing around shared issues. The location-based quality of MAZI is a facet that engages the community members we have interacted with since it stresses the importance of the local. The concrete expectations of MAZI are too early to be assessed. What is clearer is what MAZI should not be: a technological gimmick, a working layer on-top of an already strenuous working situations, a means for itself. The expectation of the first prototype in the Neighbourhood Academy is structural improvement due to technical support, a specific working tool to collect and spread information, make interactions with different neighbou rhoods in the Academy visible, lighten the burden of the figure of the 'networker'." And the following question on the **relation of community expectations with the research team's expectations**, "We are motivated by the interest of the community, see it as important not to create expectations that we cannot meet within the project. The common political interest surpasses our expectations and is an unexpected common ground with other initiatives that can be the growing ground for further prototypes and joint activities within the project."

For the London pilot, the first answer states that the **community expectations from MAZI** are in the range of "high prestige as EU funded: expectation of significant resourcing and expertise; technical expertise that may resolve local challenges; provision of equipment and ongoing maintenance; academic expertise that may help resolve local challenges, e.g. around evaluation," and thus **there is gap between the community's and the research team's expectations**, as "does not completely align with our ambitions: rather, we seek to collaborate on implementations of networked technologies that will be customised, maintained, and developed by local groups themselves, with some initial resourcing and support by the MAZI team. Our goal is to reach a point where collaborators take on the systems themselves and independently interact with other similar groups (e.g. participants in other MAZI locations) without the intervention or support of MAZI partners."

These three criteria for comparison based on the "community" variable have the capability to show a dialectical multifaceted relationship in the interpretation of the pilot projects in comparison. On the one hand, the starting ground is quite different in the two cases, if considering the above comments on expectations, in spite of the relatively similar community needs namely providing tools for content generation and using this knowledge to better understand the location and also to connect with the larger scales of the neighborhood, city etc. On the other hand, there are differences that each pilot shows in its focus on the community needs, for instance, knowledge to be stored and shared on location at the NAk in Berlin, that may be used as a 'networker' within broader networks, in contrast with the collection of environmental data to understand the connecting neighborhood spine, Deptford Creek in London. However, their reading in comparison gives us hints, in this case about the characteristics of the place, Berlin pilot location functioning rather as a "node" while London pilot expanding over its territory more like a "network" (refer to Section 7.1.2 for more details on these metaphors).

The exercise above is an illustration of how MAZI 'meeting points', created through the responses of the project interdisciplinary team to surveys, could advance the research practice in the pilots, as well as add to concept formation and in the development of the interdisciplinary framework.

To conclude this section, we represent the pilots according to the six principles of engaged research (according to the Holliman et al.'s (2013) 6Ps of engaged research). Originally designed to help universities plan and reflect on public engagement with research, the 6Ps are relevant to MAZI with its focus on introducing novel technology-based systems to a wide range of publics.

Table showing the 6 Principles of Engaged Research

	OU/SPC CreekNet in London	UdK/CG Nachbarschafts-Akademie (NAk) in Berlin
Preparedness[2]	The pilot supports SPC's engagement with local community organisations and activists as they seek to respond to local challenges. Reinvigoration of SPC's Open Wireless Network, in operation since 2008. Challenges of rapid gentrification in Deptford area displacing existing communities and social and cultural organisations and bringing in new residents. Major infrastructure project (Thames Tideway) on site next to Deptford Creek likely to have environmental impact due to works (building, and transportation of waste either by boat or road).	The pilot supports Neighborhood Academy as it builds platforms between various actors and networks from the context of DIY urbanism in Berlin and beyond. NAk is located in Berlin's Prinzessinnengarten, a contested space with an unclear future. Through developing tools for sharing knowledge about novel forms of urban action, the pilot aims at sparking and fostering lively discussions among neighbors, initiatives and city authorities.
Politics[3]	Recognising SPC's longstanding engagement and interactions in the local area. Working with small scale voluntary organisations and individuals who are limited in resources. Pilot involves a diverse range of local actors across the geographic spread of the pilot study area facing a range of challenges and with a variety of established political networks.	The research is closely tied into various political dimensions. Urban development is a highly discussed topic in Berlin at the time of the pilot, with city government now pushing for a turn towards more sustainable practices. Pilot involves a diverse range of formal and informal practitioners (e.g. right-to-the-city-activists).
People[4]	Developing a working relationship between OU as an academic partner and SPC as a community technology organisation already deeply embedded within the locality and having existing and long term relationships with diverse groups. Working alongside community activists, technology enthusiasts, and community organisers; individuals and small scale organisations, many of which work on a voluntary basis.	The pilot has different levels of inclusion and affection: UDK and NAk are the main partners that carry out the research. However, the wider network of initiatives around NAk plays an important role, either as actors involved in participatory design sessions or as bearers of knowledge that NAk aims at commoning within and by the MAZI pilot. Finally, citizens and decision makers of the city of Berlin are affected by the urban development processes this pilot aims at engaging in, hence the range of affected people can increase significantly.
Purposes[5]	Enabling the building of relationships across diverse groups and the development of tools to allow collection and dissemination of information to build a sense of collective awareness, informing long-term and new residents about what is happening around them, revealing hidden stories and histories, and engaging and enabling debates about the identity and future potential of their shared lived environment. An exploration of the extent to which the MAZI toolkit can provide an alternative media channel to current outlets and enable debate around urban development issues.	Creating "spaces" for different forms of knowledge around critical urban practices to coexist and synergize. Providing a knowledge base to engage with for both experts and laymen (neighbors). Provide discursive base for deriving collective awareness that leads to political action. Developing network technology in and out of a non-market, critical, value-driven context.
Processes[6]	Participatory Action Research approach: actively engaging with local community partners in the co-creation of knowledge, building alliances and promoting social/ collective change, recognising their expertise around local challenges. Emphasises empowerment and seeking long term sustainability. Stages include community engagement, shared explorations of challenges and potential solutions, rapid prototyping, deployment of early-stage implementations and building local capacities.	Participatory Design: Designers & non-designers, technologists and non-technologists, community activists and institutional researchers as well as artists and non-artists collaborate on iterative processes of development. Stages include the exhaustive discussion of context and problem space, the ideation of possible routes, rapid prototyping and the deployment of early-stage instantiations for explorative use.
Performances[7]	Phase 1 has been completed (community	The pilot is currently in phase II, after completing

[2] Identifying local contexts, understanding of the challenges to be faced, the researchers' preparations for dealing with these challenges

[3] understanding the local social and political contexts in which the research would be carried out

[4] Identifying the people that will be involved or affected by the work: the researchers, the community partners with whom we engaged, other community participants, others affected by the work

[5] Clarifying the aims and objectives of the research from the perspective of MAZI, the participants involved and other publics (people)

[6] Pinning down the approach, methods and techniques that would be followed by the research team

	engagement) reaching out to identify potential MAZI participants. Activities in Phase 2 are likely to focus on four groups who act as hubs for local activity at different locations along the Creek, developing their infrastructure and capacity to support and explore MAZI toolkit prototypes within their working practices.	community outreach, definition of problem spaces, first prototyping and testing. Currently, we are simultaneously working on a second generation prototype while use-testing the first one, generating valuable content for the NAk knowledge base.

[7] Considering what was found and the extent to which this met the objectives of the research

4. Comparisons between disciplinary perspectives

In Deliverable 3.5 we provided a "state-of-the-art" type introduction to different forms of participation in design that the different research partners of MAZI brought with them in the project.

In this section we present these disciplinary perspectives of the research partners in MAZI pilots, as they are reflected in four recent documents. They are two scientific papers for the Design Next Conference in Rome, April 2017, by Michael Smyth & Ingi Helgason, Napier University, and by Andreas Unteidig, Berlin University of the Arts respectively, as well as two project reports, a MAZI deliverable by Mark Gaved & Gareth Davies, The Open University, and a project deliverable for another CAPS project, by the name netCommons, by Panayotis Antoniadis & Ileana Apostol, NetHood. These documents have been drafted independently from each other.

4.1 Speculative design: participatory creation and dialogue

The conference paper "Making and unfinishedness: designing toolkits for negotiation" by Michael Smyth & Ingi Helgason (2017) proposes an intriguing parallel between the design of toolkits, which is seen as an exploratory and reflective process that keeps within a sense of pleasure and enjoyment, and the toolkit as "a site for research design". The argument builds on the composite nature of the term "toolkit", placed at the border between the "tool" --the more adaptable 'soft' element of the couple allowing for adaptive use-- and the "kit" --the 'hard' element that has a more clearly defined final outcome. Therefore, the authors suggest that the development of technology toolkits for DIY networking is a topic that frames the dialogue within the research process in the current MAZI project, and at the same time, may enable the 'soft' adaptable and joyful characteristics into products and services. Their disciplinary perspective on design innovation sheds a bright light on the topic of MAZI.

MAZI research team with Napier University has a human-centred design approach that comprises of a mixture of different methods according to the particular situation, and the particular aims of a project. For the MAZI unMonastery pilot study, they take as their starting point an approach described as; "speculative design: participatory creation and dialogue", which emphasises dialogue and use of "speculative design" as a tool or method to support that dialogue. This approach includes the development of scenario concepts, taking various forms as emerging from the particular situation.

4.2 Co-designing (infra-)structures versus designing solutions

In the conference paper "Digital commons, urban struggles and the role of Design" Andreas Unteidig & Blanca Dominguez Cobreros (2017) set up the stage for an ambitious exploration with far-reaching consequences namely the role(s) of design in processes of contemporary society. From the perspective of the designer-activists, the authors question the possible relationships between design practice and the "social", in order to understand how this relationship has transformed over the last century, and if currently emerging practices are capable to produce more sustainable structures.

The paper is woven from a multitude of threads of thought. There is a historic perspective that places the societal change promoted by the modern schools of design in Germany (i.e., Werkbund, Bauhaus, Ulm) next to current design practices aiming at contributing to large-scale societal problems. In this, the paper brings to the fore a more theoretical thread about the design process, discussed through the dichotomy problem-solving versus designing structures. The latter is seen as an emancipation from the paradigm of providing solutions, allowing for action in fast changing and uncertain situations. In this light, the authors discuss their own activity in MAZI Berlin pilot, that engages with ongoing urban initiatives.

The political argument in relation to the aspirations of design practice to become more politically involved in society, questions design's traditional role as problem solver, stemming from its roots in modernity, and argues for the discipline to rather see itself as a partner at the negotiation table within political processes. Only briefly touched, through recent government design initiatives, is the role that the state has played over time in shaping the design practice. In the multidisciplinary perspective brought to MAZI by Andreas, a novel and key driver of the current design practice is a wide landscape of political-urban initiatives that aim to change society

through ongoing political struggles, while the designer plays more of a role of amplifying, curating and designing structures.

4.3 Participatory action research

In MAZI deliverable D.2.4, "Design, progress and evaluation of the Deptford Creeknet pilot" (first version, December 2016), Mark Gaved and Gareth Davies, the research team with the Open University, propose to frame the participatory design process by drawing from the participatory action research (PAR) approach to applied research in specific communities. “PAR makes sense of the world through the collective efforts of researchers and community partners” (p.12), focusses on empowering marginalized people, and thus is aligned also with the broader goals of MAZI to democratize access to tools and enable sustainable use of infrastructure; a perspective brought by the authors to the MAZI interdisciplinary team as well.

This report refers to the first seven months of research work on the Deptford Creeknet pilot, and thus an extensive part of the paper is dedicated to the description of local actors and their networks, being individuals or collective community partners, who either might be potential partners or have already engaged with the project activities. Spending extensive time to engage with the local community is a critical part of the participatory design process, as it is understood that, “we needed to establish terms of reference based on interpersonal relationships facilitated by a history of trust, rather than purely based on legal forms and contracts” (p. 13). Moreover, as the project topic and the “offline networks” in general are not conveyed easily to community partners, from the evaluation of this pilot phase stands out the necessity to provide a conceptual framing, as “we need a narrative to engage people beyond inviting them to try new technologies” (p.34).

The authors chose to structure the document according to the Holliman et al.’s (2013) six principles of engaged research (the 6P’s), which is a framework "originally designed to help universities plan and reflect on public engagement with research", drawing from Gareth Davies expertise in this area and recognising that these principles are relevant to MAZI, with its focus of introducing novel technology-based systems to a wide range of publics. The 6P’s framework refers to 1) preparedness; background and what was done to prepare the pilot, 2) politics, meaning both local and broader political landscapes, 3) publics, identifying who are the individuals and groups to engage in the participatory design process, by starting with community mapping, 4) purposes, what aims and objectives are collectively devised, 5) processes including material and methods, where they elaborate on the PAR approach, and 6) performances or measured results, according to the aim to “move beyond dissemination and one-way forms of communication towards engaging participants as equal partners” (p.16). An academic researcher in DIY networking and experienced practitioner who set up a networked community, Mark brings to the MAZI interdisciplinary team a social sciences' perspective, by understanding the implications of engaging community partners into the design process, and also an expressed interest to support educational activities through DIY networking technology.

4.4 Interdisciplinary structures for information sharing

Panayotis Antoniadis and Ileana Apostol --the research team with the nonprofit organization NetHood based in Zurich-- have elaborated for the CAPS project by the name netCommons, the deliverable D3.1, which is the first version of the "Multi-Disciplinary Methodology for Applications Design for CNs, including Design Guidelines and Adoption Facilitation" (December 2016). In this report they propose a first step in the development of a methodology for participatory design of local applications, conceived to be hosted in a Community Network (CN) without relying on the existence of Internet connectivity. Half of the document is dedicated to rather theoretical considerations, and to lessons learned from disciplines like urban planning and design that apply knowledge in 'real life laboratories', while the other half of the narrative reports on an ongoing case study of the CN in the Sarantaporo area in Greece. From the first experiments with participatory processes, it seems that the most important rule is that, rules cannot be easily formalized even if they are critical in structuring the process; they need to be somewhat schematic and flexible enough, as every local context presents variations and specificities. In a real life situation every problem is a one-shot operation, which needs to be thought through and tackled with care and patience over a relatively long period of time. Therefore, they advocate a ‘step back’ attitude of field researchers, and propose to focus on structuring opportunities for encounters, deliberations and information sharing for the project research team, and also together with the community partners. Based on similar principles with the “planning for real” participatory technique developed by Tony

Gibson in the UK (e.g., cited in Forester 2008), through intimate settings and a climate of non-committal freedom, such opportunities have the potential to stimulate interest, and at a later stage also engagement in the participatory design process.

5. Cross-fertilization events

Events are key moments of cross-fertilization where the different perspectives meet each other. During the first year of the project, the first such event was the Berlin workshop, a great opportunity for the different partners to see how the first in the row pilot started, the challenges that appeared, and the solutions provided. The protagonists were UdK and Common Grounds and their own local network of activists. The parallel workshops organized to discuss with some of these people interesting questions related to MAZI helped us to see ourselves as a group in the eyes of this community, but also to build awareness on the "other side" of what this project is about and who is involved.

The INURA conference was the second cross-fertilization event. Despite the strong role that the INURA Zurich Institute and NetHood played, the latter especially since Ileana Apostol and Panayotis Antoniadis were among the organizing team, the event provided a relatively neutral space away from the actual pilots' home locations. It made possible to access an audience both engaged and non-expert for a significant amount of time (8 days); in Berlin the contact of the MAZI team with outsiders, although very stimulating, it lasted only a few hours.

A key feature of the interdisciplinary framework is the fact that in the cross-fertilization events, MAZI partners do not only interact between them but also with external actors, not attached to the project in any way. More specifically, the exposure to outsiders as a group, placing ourselves in spotlights coming from different perspectives, is very important for building MAZI identity and also to better understanding each other over time.

In the following, we report on the exchanges that took place during the INURA conference and the Berlin workshop, what we learned from them, how they informed our under-development framework for comparisons, and how we plan to use these lessons for organizing future events. We include also short descriptions of the parts of the Deptford workshop, unMonastery Summit, and the Venice Biennale workshop that included interactions between a subset of MAZI partners and external actors and can bring additional elements to the analysis.

Detailed descriptions of the Berlin workshop, especially those parts that have not been documented in the corresponding deliverable (D2.1), and of the INURA conference are available in the Appendix. By way of recalling participants' memories, such detailed descriptions are useful in stimulating the expression of those thoughts that are not always easily articulated during the event's "action" (e.g. some sort of 'reflection-post-action'). They also give a good overview on what happened to those who did not attend the event.

5.1 The Berlin workshop

The first public event of MAZI was held on July 15th, 2016, in Prinzessinnengarten, organized by UdK and Common Grounds and was combined with the project's second plenary meeting. This brought together all partners of MAZI, therefore constituting an appropriate field to present the current development of the prototype to the public, while testing it for the first time within and beyond the core team.

The public event was organized by UdK's Design Research Lab and the NAk and took place in the experimental architecture the "Laube" (Arbour) in Prinzessinnengarten. We invited the participants from the previous two co-designing workshops (refer to D2.1) of the Berlin MAZI pilot, all the partners from the MAZI consortium as well as several external actors to participate in a third workshop, finishing with an event open to the general public.

Under the framing of "MAZI: Between digital commons, urban struggles and local self-organization", the event hosted a discussion around DIY-networks that intended to go beyond the ecosystem of MAZI. The main objectives of this event were therefore, on the one hand, to present MAZI to a wider audience and publicly discuss relevant topics around the project's objectives, and on the other hand, to connect and exchange ideas between MAZI partners and local initiatives and relevant actors (see Appendix A).

***Figure 4**: A scene of the workshop situation as part of the event on July 15th 2016*

Here is a structured summary of this cross-fertilization event:

Profile of outsiders: Community activists, Eco-activists, filmmakers, artists, urban researchers, designers that are engaged in critical urban practices in one or the other way.

Relationship with the outsider group: Members & friends of NAk, collaborators of UDK

Role of MAZI consortium in the event: a) Introduce DIY networking as a tool for urban activism, b) discussion of issues relevant to both consortium and wider network, opening perspectives

MAZI proposals: DIY networking as a means for fostering collaboration and exchange in-between actors of related fields, enriching discourse around the right to the city by introducing related issues in regards to technology, exploring possibilities provided by DIY tech for civic participation processes

Community suggestions/ideas: Further develop modi of interaction for visitors/users of the archive (outside NAk actors), Work on usability (especially captive portal)

Challenges identified: usability (see above), prototype can only be successful if cared for by the community partners and actors of their respective networks within the MAZI pilot

MAZI zones tried out: Custom build NAk/MAZI archive & recorder

Overall feedback: The overall feedback to the event showed that the pilot team succeeded in gaining basic trust by the wider community. A sense of shared values was established and clear interest in the project by "outsiders" was stated.

5.2 The INURA conference

INURA plays a key role in MAZI, since the Zurich Kraftwerk1 pilot is run by Philipp Klaus (INURA Zurich Institute), who is the network's committed secretary since 1998, and Panayotis Antoniadis & Ileana Apostol (NetHood), who are both INURA members since 2013 and members of the organizing committees of the Athens conference (2015) and the Bucharest conference (2016) respectively.

***Figure 5**: Debriefing of the INURA conference in Bucharest during the INURA retreat (Sibiu, September 8, 2016)*

In this year's conference in Bucharest, MAZI brought to Bucharest an interesting technology that can play a key role in the extension of the 'right to the city' concept to the "right to the hybrid city". The idea was to introduce DIY networking technology as a very powerful tool for urban activism. But it also brought with it an extended group of non-academic activists, both regular INURA members and newcomers, some of them part of MAZIs' consortium, and others as invited speakers for the two scheduled workshops.

In addition to the regular conference activities, in the city part and in the retreat MAZI organized several sessions. More specifically, a half-day workshop in Bucharest, September 2, 2016, before the official start of the conference introducing the project and the work of special guests/activists, and a short plenary presentation and a parallel workshop during the retreat, on September 9, 2016, which are all documented in detail in Appendix B.

Here is a structured summary of this cross-fertilization event:

Profile of outsiders: A well-established network of researchers and activists at their yearly conference gathering every year around 100 people from all over the world

Relationship with the outsider group: Secretary of the network (Philipp Klaus) and members of the network (NetHood)

Role of MAZI consortium in the event: Introduce DIY networking as a tool for urban activism and also different forms of activism represented by the MAZI pilot studies and MAZI guests.

MAZI proposals: DIY networking as a means for informing citizens for topics of concern, more egalitarian collaborations between researchers and activists.

Community suggestions/ideas: Coordinate urban actions protected against surveillance

Challenges identified: Appropriation of the technology by corporations, dependence on ICT

MAZI zones tried out: Owncloud, etherpad

Overall feedback: Many people liked the proposed tools being all aware of the risks of using corporate platforms like google, but not having the technical expertise to discover alternatives. The most popular use of the MAZI zone was for sharing photos, but etherpad was also widely used (even if mainly its online version). Many discussions for future collaborations and a very positive view on the fact that MAZI supported the participation of activists for whom it is not easy to come to INURA conferences.

5.3. Other cross-fertilization events

In addition to the above major events, a few MAZI partners had more opportunities to come together in different locations and get a glimpse of the activities taking place in the different pilots.

The Deptford workshop

A gathering organized by SPC in the heart of the CreekNet pilot study location, Deptford Creek, in April 2016. MAZI partners and members of INURA were invited to gain a better understanding of the CreekNet locale in a day's activities. First, by taking part in a 'low tide walk' organised by local environmental charity Creekside Discovery Centre, wading along the bed of the Creek to understand the environment and how it has changed over time. Then a walk to the artists' collective floating printworks and arts venue, the Minesweeper, for lunch and discussion about local challenges. Then a further walk along the lower end of the Creek terminating in visiting SPC's media lab. See http://wrd.spc.org/mudlarking-on/.

***Figure 6**: Community outreach and cross-fertilization in Deptford. Members of MAZI Consortium, INURA, and guests participating in educational tour organized by Deptford's Creekside Discovery Center*

At the Minesweeper there were interesting discussions about the threats that this 1950s boat faces due to the intended development in the area and ideas on how a MAZI Zone could help them to better inform the neighbourhood about their activities, even provide a platform for a location-based crowdfunding to repair the boat.

***Figure 7**: MAZI and INURA colleagues in informal discussion after a round of self-introductions aboard the floating arts venue "Minesweeper"*

However, there is a sad postscript to this promising collaboration with this arts organisation: at the time of writing of this deliverable (January 2017) the Minesweeper has been destroyed after a fire on board leading to a "massive explosion."[8] A crowdfunding campaign[9] has been started but the future of the group's activities, and the moorings for the other boats in the Collective (their right of residency on the Creek) are now under threat.

Greek Pavillion, Venice Architecture Biennale

In the context of the preparations for the Kraftwerk1 pilot, NetHood and INURA Zurich Institute in collaboration with Co-Hab Athens organized a 4-day workshop titled "Co-housing practices: Inventing Prototypes for Athens", a knowledge transfer exercise between experts on the Zurich cooperative housing model and researchers and activists in Athens, the Co-Hab Athens and INURA Athens teams.

[8] http://www.standard.co.uk/news/london/deptford-creek-boat-fire-arts-venue-destroyed-after-massive-explosion-sparks-blaze-on-board-boat-a3433886.html

[9] https://gogetfunding.com/DeptfordMinesweeper-Fire-Fund/

***Figure 8**: Andreas Wirtz (Cooperative Housing Board, Zürich) introducing Zurich's cooperative housing scene at the opening of the symposium in the Greek Pavilion, Venice Architecture Biennale 2016*

Andreas Unteidig from UdK joined this event to place in the Greek Pavilion the Polylogue II, a novel installation inspired by the concept of the exhibition pavilion. More specifically, Polylogue II comprises of three boxes and a keyboard. Passers by can type a question on the keyboard which appears in one of the boxes and is sent to people that have installed on their smartphone a dedicated app. When one of them replies, the box prints the answer on a paper roll. After a previously set time expires, the question is also printed allowing people to go back to the history of interactions, even cut and keep as a memory the piece printed on the paper role with their question and answer (and people did do this!).

***Figure 9**: Visitors of the Greek Pavilion interact with the MAZI prototype "Polylogue II"*

As a MAZI group it was interesting to be responsible for these two "parallel" happenings in the Pavillion: the "co-housing practices" workshop and the Polylogue II installation. The main functionality of Polylogue II was

also interesting, as it is very close to the “knowledge transfer” topic of the Kraftwerk1 pilot, which was a core theme of the workshop.

unMonastery Summit at Kokkinopilos

Paul Clayton from SPC participated at unMonastery’s unSummit at Kokkinopilos, and blogged about his experience: http://wrd.spc.org/326/, including the first experiences with the MAZI toolkit that was just assembled before this event and his impressions about the plans of the group for running their pilot in the abandoned school of Kokkinopilos.

***Figure 10**: Paul Clayton (SPC) leading the daily tai chi exercise at the unMonastery summit at Kokkinopilos village*

6 Synergies and tensions between research and action

In this section we elaborate on synergies and tensions that have been identified throughout the different dimensions of the project between researchers and community activists. Although some of these tensions may seem obvious, it is very valuable for the project to explore them diligently, drawing on real interactions between the project's partners and analyze them as observed.

For this, we include in the theoretical context of our framework (see Section 7.3 below) the framing of those topics as *conflicts*, as the meeting of and exchange between profoundly different discourses that are impossible (and also undesirable) to resolve and to fully align with each other. They are, as Ramia Mazé describes it, "rooted in different ontological or ideological positions, historical moments, geographic, and socio-economic locations. Rather than a post-political approach, which might disregard contradictions and presume consensus, examining the political dimensions involves recognizing differences in positions and asymmetries in relations" (Mazé, 2013).

Innovation versus pragmatism: When to (not) design

MAZI as a project is set up around four different pilots, in which one research institution partners with a local, non-ICT community. The pilots hereby serve a dual purpose, namely a) the support, amplification and moderation of the goals of the respective local community, through the appropriation and design of DIY networking technology; and b) gathering of knowledge throughout those processes that can be transferred and made use of in the design of MAZI toolkit. This setup brings about an interesting contradiction that we intend to both use for grounding the developments within MAZI in the empirical reality of our partner communities; but also as a driving force for creativity and innovation, as the constant negotiation of what is superfluous, necessary, desirable or elemental opens up perspectives we deem valuable for our processes. Whereas the local communities are primarily interested in the appropriation of technology for their respective goals and processes, the partnering institution is, in addition to sharing this goal, interested in making use of this contextual environment to bring about something new or at least relevant in the context of the ICT, design or community informatics community.

This somewhat abstract description becomes more graspable when illustrated through the concrete case in MAZI pilot setting in Berlin. As the work of social movements often is done by individuals in their spare time (or with rather little funding), the community partner Common Grounds is very sensitive to the issue of creating additional work for the stakeholder communities and individuals, and instead wants to integrate technological developments so to make them part of the daily work, and to design them to help and to amplify the processes that are already running. While this concern is fully displayed in the setup of the MAZI pilots, its implementation is not always trivial, as useful developments often come about through detours that initially produce the requirement of attention, in order to fully serve the community's purpose afterwards.

Paid research versus voluntary work, or: The difference in currencies

Throughout the various discussions that took place over the course of one year, another recurring topic was the asymmetric relationship to different forms of dissemination within the pilot teams, and within the consortium as a whole (but primarily visible in comparison of research institutions with local [activist] communities).

While it seems obvious that dissemination happens in all conceivable circles, and with it the generation and accumulation of "capital" of any kind, what seems profoundly different is the "currency", with which the different capitals are denoted, e.g. publications, community credibility, etc. This point has been described in more detail in the depiction of the INURA conference (see Appendix B).

Facilitation versus authorship: Different levels of involvement

As described above, the Berlin pilot of MAZI acknowledges the NAk as an entity that cannot be isolated from the socio-political environment in which it is embedded in the city of Berlin and beyond. Hence, the "community partner" NAk is to be seen as an initiative that stands in close interdependence with other

initiatives and individuals that consequently have to be, and have been, included into the process. Within this setup, we managed to initiate lively discussions and to overcome initial scepticism about the potential added value of technology for the relevant initiatives. Following this phase we encountered a high level of curiosity about MAZI, and its potential as an added value for the community. A clearly motivating effect has been the deep interest in the political approach of the project – community ownership of technological development, community owned data, DIY technology and self-organization. These aspects have quickly been linked to the political visions of many of the initiatives when speaking of community owned housing, self-sufficiency and community organizing around shared issues. The location-based quality of MAZI is a facet that engages the community members, as it stresses the importance of the local. And although we see the MAZI as a collective project, we have to consider the fact that there are different roles and responsibilities within MAZI (refer also to Section 7).

In context the Berlin-team, made up of UdK and Common Grounds, have a strong curating and decision-making role. We make this explicit and transparent in our work with communities. Nevertheless, the community initiatives and other actors invited into this process are collaborative thinkers and are vital in the forming of the project and its results. However, all initiatives are bound to the limitation of time, lack of economic resources, limitations of voluntary commitment and the significant political pressure that underlines their day-to-day work. These constraints will always be the boundaries of the implementation of MAZI within the initiatives. Taking this aspect into account in every step of the way will be vital for the sustainability of MAZI implementation.

Creating expectations versus creating openness: Managing anticipation

The term “toolkit” designates a decisive openness, something that can, will, and must be appropriated and actualized through actual use in order to become a tool. It is a means to an end, whereas the end remains unspecified, as much as it is unspecified what one can do with a hammer and a nail. To design the toolkit, nevertheless, a certain degree of use-anticipation has to take place, otherwise there is nothing to design.

Expectation management appears to be central to the participatory development of the MAZI zone, and we see it as vital not to create expectations that we cannot meet within the project. As described in the point above, the process structure involves a wide range of stakeholders with very different roles and levels of involvement. While we decisively aim at incorporating the needs, wishes and conceptual frames of the relevant stakeholders into the design of the prototype, it is not possible to fulfil the preferences of each and every participant in these processes. Therefore, not to risk disappointing the partners, we chose to carefully communicate the structure and aim of the co-design sessions. The goal, again, is to create tools with sufficient openness to allow for creative appropriation, productive misuse and the alteration of the prototype to fit the needs, contexts and circumstances of more than just one community.

Added work versus added values: Context-sensitive development

While working together with the described initiatives/communities, it proves to be critical to amplify existing processes instead of creating new ones, hence to anticipate any developments as added values, not as additional fields for work. A risk we identified at the beginning of the project is surpassing actual needs of NAk as well as of the wider community in search of possible uses of the DIY-network. Seeing that resources within community initiatives are most often strained in form of time and financial budgets, it is vital to create situations where the MAZI activity is an added value and not an added burden. We are meeting this risk through the intense pre-surveying of needs through the community workshops as well as by developing a MAZI-prototype for the NAk that has the potential of being adopted, appropriated and multiplied by other initiatives, focusing on questions of content production, editing processes, maintenance and adaption/multiplication. Thus it is paramount to avoid the understanding of MAZI as a technological gimmick, a working layer on top of already strenuous working situations or as a means for itself.

Formality versus informality: the “informed consent” tension

One interesting tension that arose from different approaches rooted in institutional practice was the question between academic formality and a “light touch” approach in the relationships between the MAZI consortium and the local communities affected by the project. This tension became apparent in a discussion about whether or not to ask participants of community workshops to sign consent forms, in order for the research

consortium to be able to use the data generated without constraint. By some, consent forms were seen as a barrier and perceived to represent taking from people.

At the Berlin community workshop in July, researchers raised the issue of consent and asked participating community actors to sign off on data collection. To some individuals, both on the research institution side as well as among activists, the impression given was that in order to take part in the event, one needed to sign the consent form. There was not enough time to read and to fully understand that the form was only about the interviews given by few. The inconvenience caused to the host community was expressed by the apology that "[…] we are not used to such procedures", following the request for signatures. Hence, the learning is that we could and should apply academic formality (such as consent forms, etc.) carefully, as they potentially do more harm than good – especially in cases when we reach out to activist communities typically suspicious of large-scale, institutional projects.

We should also reflect on what type of information is really needed for our research and whether we can do some compromises like, for example, concerning the visuals to be published on the website, we choose to exclude photos that show clearly identifiable faces, and to post only those that include people we know and thus can ask their permissions after the event. Where the pilot projects engage with their local people and where there is general collaboration of effort then it is easier to gather mutual consent to encourage contributors to make their materials public by default however restricted the access may be. Consequently, we make a habit of engaging in collective discussion about what a more collaborative approach might look like, and in identifying what we do and what kind of data we collect, we aim to be reflective practitioners.

7. Enriching the interdisciplinary framework

The previous sections provide a rich set of comparisons between pilots, community actors, and researchers involved in MAZI. Developing these comparisons based on our initial framework presented in D3.2 (Figure 1) and D3.5 (Figures 2, 3) we made the realization that there is not a clear separation between the research and community actors and pilots are considered as compound elements in MAZI ecosystem.

For this, we propose here two enhancements of the interdisciplinary framework:

- One towards opening up and inspiration by deconstructing the pilot entities and comparing them more thoroughly
- One toward negotiation and convergence by placing the toolkit as a boundary object between different subsets of the project's actors

These enhancements will help us more clearly implement different phases of collaboration that correspond to the "back and forth" around the MAZI toolkit as the boundary object. They also open a new possibility not considered before --the potential of imagining different research partners interacting with different community actors-- some sort of "kaleidoscope" phase that allows different combinations of research and action, which although there are no resources to implement in practice could be helpful as conceptual explorations.

In order to extend the interdisciplinary MAZI framework we propose in this second version of the deliverable to create relational representations of the interdisciplinary activity in the project. For that, we make analogies with spatial representations, such as the notion of 'frame' in anthropology (e.g., Sclavi 2006) and the concept of 'territoriality' in human geography (e.g., Delaney 2005), to depict the web that the researchers weave through their activity (see Section 7.1.1). Similarly, to create an imaginary for the four different pilot projects we employ the metaphors of the 'seed', the 'node', the 'cluster' and the 'network' (refer to Section 6).

This representation of relationships may be seen as an extension of the 'catalogue of questions' (D3.5, Section 2.2), addressed to describe in detail the pilot processes for comparative analyses; at this later stage, these descriptions are presented in comparison in the current document (D3.6, Section 3). At the same time, this extended version is within the transdisciplinary framework, as stated also in the Introduction, the conceptual moment of representations. Thus in the following sections we describe the framework enhancements in more detail according to two domains

1. similarities, differences and tensions, and
2. negotiation and the MAZI toolkit as a boundary object.

In addition we discuss possible improvements for the organization and documentation of future cross-fertilization events. Finally, we propose a set of self-reflection exercises to advance our common understanding whose results and analysis will be included in future deliverables.

7.1 Exposing similarities, differences, and tensions

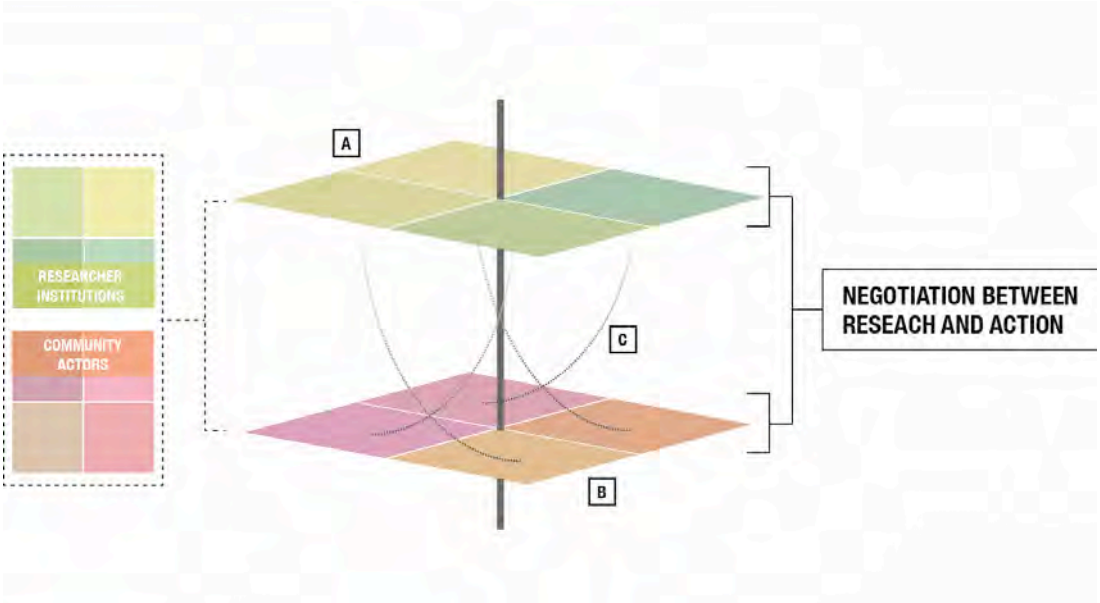

***Figure 11**: Each group (e.g. pilots, researchers, activists) in and for itself is far from homogeneous and free of tension but rather an assemblage of difference, which is subject to constant negotiation. The MAZI toolkit provides structure and vocabulary for this discourse.*

Figure 11 depicts the three axes of the ongoing project "negotiations", concerning three working relationships namely a) layers of negotiation between project researchers, b) layers of negotiation between pilot projects, and c) synergies and tensions between research and action.

Including these layers of negotiation in the analyses and producing self-reflective surveys to document them as they evolve over time, discussing them with MAZI group during the interdisciplinary meetings as well as observing how they manifest in our cross-fertilization events, have the potential to release many of the existing (inherent) tensions, in order to facilitate the collaborations in MAZI on a more transparent ground.

7.1.1 Comparisons between MAZI researchers

As for the analyses of the working relationships established so far within the project team, we structure them around the "frames" (refer to e.g., Sclavi 2006, Forester 2013) within which each member of the group operates. There is an institutional frame that constraints the action of researchers, in addition to the personal frame that we all carry around in our professional dealings and practice. The latter are to be explored by means of self-reflective answers to questionnaires, in future work. But the institutional frame is developed in the following three subsections. By **researchers' institutional frame** we imply here the net of influences that formal institutions have on their research activity, together with the means of enforcement. These formal institutions include professional affiliations, the degree of commitment to the project, the time budget allocated to the project tasks, the disciplinary frame, of course, and others of this sort. The means of enforcement of these institutions vary in scale from the personal to the project level, which covers a spectrum of constraints from the EU project frame to the local, pilot project, frame.

In terms of institutional affiliations, the researchers in this project work with universities in four different contexts namely University of Thessaly in Volos, Berlin University of the Arts, the Open University in Milton Keynes and the Napier University in Edinburgh, as well as with a non-profit organization NetHood in Zurich. Aside from the fact that the researchers are each of them at different moments along their professional career path, also the project activity is carried out on various work commitments. There are researchers working full-time on MAZI, and others working on a part-time basis; and there are academics who are supporting the research work, but the time they allocate for the project is included in their activity at the academic institution.

These multiple degrees of commitment and dependency to the overall research project generate a range of 'territorialities', if we may borrow a spatial metaphor from human geography (refer to, e.g., R. D. Sack 1983, D.

Delaney 2005, D. Storey 2012) that describes the interrelations between space, power and meaning affecting individuals --researchers in MAZI in our case-- as an influence/control strategy.

Furthermore, the disciplinary frame varies as well, across computer engineering in Volos, design research in Berlin, computer interaction and social sciences in Milton Keynes, human interaction design in Edinburgh, and an interdisciplinary approach (including urban design and network technologies) to participatory design processes of DIY networking. In addition, the degree of attachment, to the project topic and/or to its applied version in the pilot projects, is variable. Nevertheless, from the brief notes on the recent research papers of the four MAZI pilot groups that we have included in Section 4, we mention here as disciplinary perspectives of the project team, a) speculative design: participatory creation and dialogue, b) co-designing (infra-)structures for the grassroots, c) participatory action research, and d) interdisciplinary structures for information sharing.

These four perspectives sketch a spectrum of practices, in which the researchers/designers/activists relate in slightly different manners to the reference community, and there is also a variation of understandings of the designer's role and impact on the community, the type of engagement of the community in the design process, the form of engagement of the researcher with the community (for eliciting information about needs, etc), the framing of the result of design (addressing needs, providing tools, opening possibilities), the mechanisms available for resolving conflicts, evaluating the results, and more.

7.1.2 Comparisons between the community actors

The comparison of the difference pilots above reveal many similarities and differences between the different contexts, the local communities and the role of MAZI. However, little is revealed about the profile of the key actors, MAZI partners that will be responsible to deploy different MAZI zones in their communities.

The **Neighbourhood Academy (NAk)** is, on the one hand, an extrovert and active group, linked with many different activities, busy receiving guests and answering interviews; on the other, it displays a multitude of preferences that may often prove difficult to integrate within collective decisions due to conflicting interests (e.g., the "garden" versus the "academy"). Moreover, we may say that they are already "converted" to DIY networking, as they follow similar practices in different domains as well (e.g., from agriculture to DIY chairs in the garden), but it is very likely that they would request a certain "quality" level, since many digitally literate people visit or are active in the garden. All in all, this is a very demanding "production environment".

SPC's **James Stevens** is a pioneer in DIY networking, and also a professional in the technology sector. Both his passion and work evolve around the core technology of MAZI, and the fact that he has so much experience could be both good and bad. Good, because we can avoid repeating mistakes of the past, and bad because repeating them today might lead to a different result! James works with people at a personal level and the SPC media lab the Deckspace, a place for workshops and knowledge sharing, is more like a retreat place than like a busy public square. James is a great networker and very much respected and trusted in his community, which is again, a great advantage for MAZI activities, but also a challenge since we will not want to put the trustworthiness of James at risk because of the contractual obligations of our project.

Unlike the NAk and SPC, at present Kraftwerk1 is not a place that visitors come in large numbers, as there are many newer housing cooperative projects in Zurich that attract outsiders' curiosity; but people talk about it. It is a reference point (spatial, social and temporal) for cooperative housing projects, and a precedent to be referred to as a success story of an alternative practice to urban development; it created a milestone in the course of housing design practices. Although **Philipp Klaus** (INURA Zurich Institute) is a "member" of the Kraftwerk1, --the core element of Zurich's pilot-- he has not power of decision. Interestingly, he has been working inside the cooperative since the beginning (2001) but became also a resident four and a half years ago, placing in two distinct roles inside the cooperative, both worker and resident. Philipp has been for almost twenty years INURA's secretary, and INURA is a big part of his identity trying to balance academia, as a lecturer of geography at ETH/UZH, and action, in the cooperative movement and various initiatives in the city. He gives interviews to national newspapers on developments in the city around urban issues and is one of the "alternative" mainstream voices in Zurich.

The **unMonastery** group is very diverse itself and still fluid in its membership; many differences in background and mentality exist between its members. They have a strong artistic outlook, claiming that their "working

model of monasticism provides generous examples of physical cleansing rituals, and it remains to give them an honest trial" but "to protect ourselves [themselves] from failure we have stretched the timeline of our learning period over 200 years", and also critical attitude, being ready to "contradict the premise of any technological fix as a viable meeting place".

Part of our future self-reflection exercises will be exactly to reveal the specifics of the different actors in the project that will help us to implement and analyse the process of negotiation over the MAZI toolkit.

7.1.3 Tensions between research and action

The research-action relationship and its associated tensions have been the subject of theory building in planning for decades (e.g., Friedmann 1987, Forester 1999 etc), and have captured as well precious deliberation time during interdisciplinary conferences, including the INURA conferences.

Planning theorist John Forester, for instance, has explored the nuances of applying theory in practice in complex planning processes, and draws on practical wisdom in order to build theory. In early writings Forester (1997) suggests to move beyond dialogue and use deliberative rituals toward transformative learning. In a more recent article he proposes to adopt an attitude of "critical pragmatism" developed through various practical experiences; in particular we note here, the argument of Frank Blechman of Maryland, who started his career as an advisor to a candidate for office, who observed that long lasting and the most damaging conflicts are rooted in non-negotiable issues like deeply held values, so they would not be resolved by negotiation. Therefore, Forester argues, "Blechman shows us that a critical pragmatist orientation might be both process and outcome oriented: both respectful of parties' initial "frames" and also respectful of the parties' capacities to learn from, and about, each other, so that they can work to invent creative new options for action, work to produce pragmatic outcomes serving their values and interests, as well" (Forester 2013, p.14).

Regarding the tensions and required negotiation between research and action, as documented in Section 6, Marianella Sclavi (2006) proposes a spiral flow of a) active listening, b) emotional self-awareness, which is a dialogue between emotions and the way we deal with them, and c) creative conflict management or, also called, alternative dispute transformation. Building awareness and skills into the elements of this triad is essential to becoming a good listener and communicator, and to establishing common ground and open communication.

Active listening is an art rather than science, implying the ability to change deeply rooted habits of perception and evaluation, through humor and poetry, considering that "this is a play" etc. To become a good listener one needs to recognize first the difference between changing a point of view from within an assumed set of alternatives or the so called "frame", and changing the "frame" itself, which allows the possibility of another's differences.

Thus in active listening there are two stages of changing the personal "frame" in order to open up the dialogue. According to Sclavi (2006) on the one hand, there is a 'thin' version through empathy, considering the other as being right, intelligent or by at least assuming that what the other says is making sense. On the other hand, there is a 'thick' version through exotopy or extra-locality, requiring a displacement of yourself from the assumed set of alternatives, from your "frame", in order to be able to displace the interlocutor from his own frame. This last version implies reciprocal recognition and respect, and a gentle elaboration of the trauma involved, as there is always some degree of trauma related to conflicts. There is again an art required, nevertheless, mostly when there are disagreements, that the partners engaged in deliberations shall develop in dealing lightly, playfully and creatively with displacements, which are at the core of a self-reflective practice implying cultural shocks, cognitive dissonances and "plain interest conflicts" or power relationships.

7.2 Negotiation and MAZI toolkit as a boundary object

The MAZI toolkit is conceptualized as the project's "boundary object." Thus we could imagine the speculative design of the MAZI toolkit taking place between many different groups such as a) between researchers, b) between community actors, and c) researchers and community actors, inside each pilot or d) across all pilots

(see Figure 13), the latter being the original plan in the project: MAZI toolkit, as a "single" boundary object between all project members.

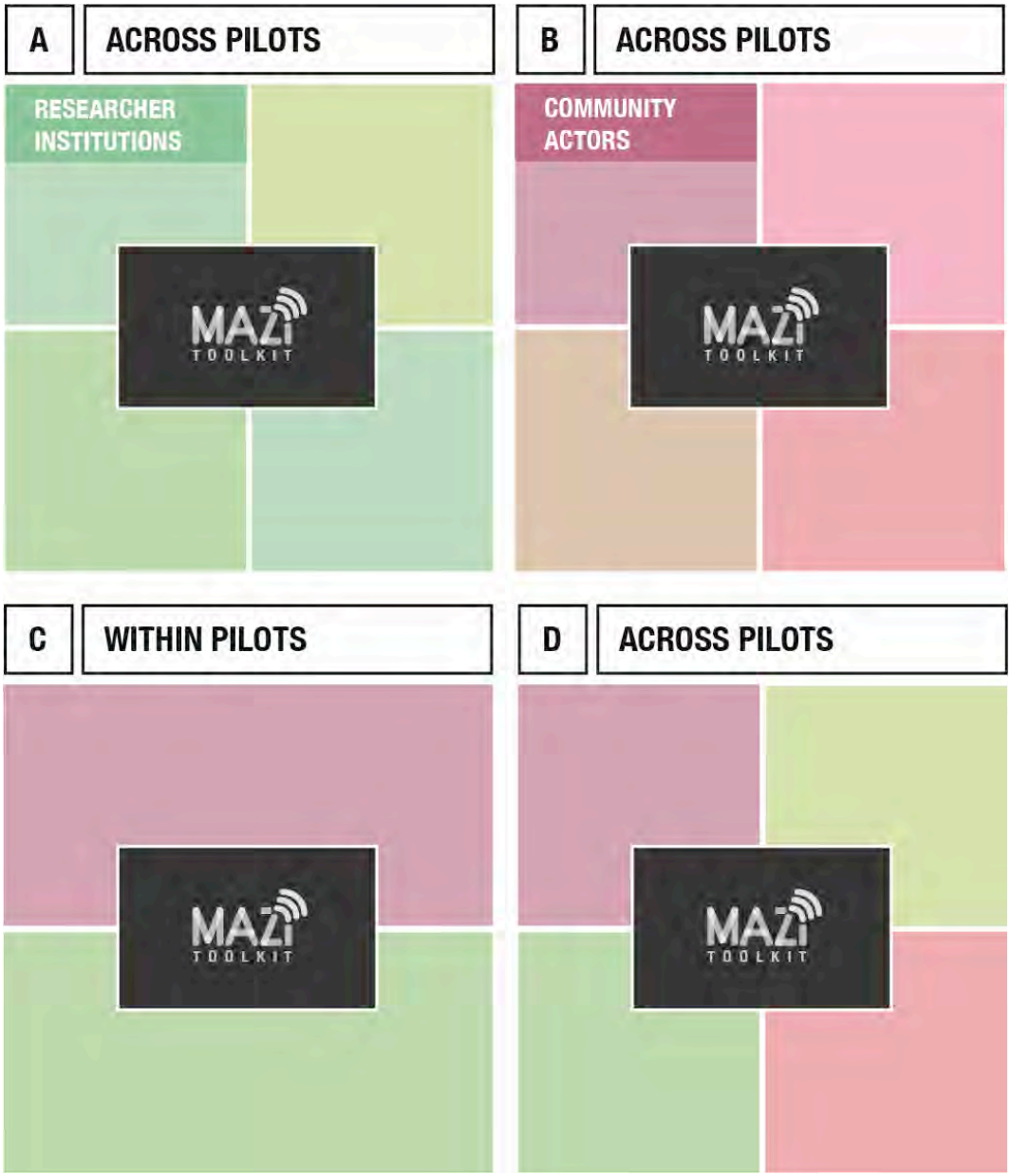

***Figure 12**: MAZI Toolkit acts as a boundary objects across several layers of differences: Between the research institution and the community actors within each of the pilots, within the diverse group of researchers (coming from different disciplinary and institutional backgrounds) as well as in between the actors of the consortium as a whole.*

Before taking up this complex task of negotiation, we propose to make first attempts in smaller groups, that is the individual pilots, which all work with a specific "disciplinary" perspective on participatory design to be applied in very different environments. Thus, the proposed strategy is to place MAZI toolkit as a "local" boundary object between these actors in every pilot, and assign as first task of working together on proposing a speculative description of the toolkit, including the form that this description should take to serve better as a boundary object, but also an analysis of the negotiation process toward a commonly agreed outcome. The results and analysis of these exercises will be included in the following deliverables.

SELF-REFLECTION EXERCISE 1:

Every pilot couple should negotiate on a speculative description of the mazi toolkit as a boundary object and reflect on the process of convergence to this commonly agreed outcome (see figure 13, c)

Some possible elements that could be part of the description include the following:

a) Introduction and overview
b) Structure of the toolkit
c) Guidelines and scenarios
d) Customization options for specific applications
e) Physical representations
f) Additional physical/hybrid elements
g) Power supply
h) Warnings
i) other?

Note that the description of the toolkit does not need to be exhaustive, but include many a variety possible elements in different dimensions, from the very generic (like the welcome message) to the very detailed (like a small warning in the guidelines for the deployment of the toolkit in a specific scenario), from text to images or even description of physical objects (like cards), from expert users to novice.

7.3 Organization and documentation of cross-fertilization events

Documenting the interactions that took place during an event is one of the most challenging tasks, and especially when these interactions do not happen at the "main stage". Our first experiences, in Berlin and at the INURA conference in Romania, made clear that we need to devise a more systematic way to capture our impressions during the various upcoming cross-fertilization events.

We should also trigger reflection at later stages, when things have settled and surface the most important moments and lessons learned. For this, the next self-reflection deliverable D3.11 will include also the results of a simple questionnaire to be answered by all partners that participated in the first two cross-fertilization events. This feedback will then help us to organize and document the two important upcoming summer events in London and Volos:

SELF-REFLECTION EXERCISE 2:

Reflect on the interactions in past mazi cross-fertilization

Events and identify important moments and lessons learned regarding regarding

a) Your understanding of other partners
b) Your role in the project
c) The relationship between research and action
d) The design of your own pilot
e) Ideas for the MAZI toolkit in general

8 Summary and future steps

We have analyzed the content produced during the first year of the project in accordance to the original interdisciplinary framework introduced in Deliverables 3.1 and 3.5. Out of this analysis, a wide variety of similarities and differences emerged which motivated us to enhance our framework toward two directions: one towards opening up and inspiration, by deconstructing the pilot entities and comparing them more thoroughly, and another one toward negotiation and convergence, by placing the toolkit as a boundary object between different subsets of the project's actors.

Based on these enhancements, we identified a set of "self-reflection" exercises that will help us better understand the different perspectives of the project partners, as well as to innovate in the ways we collaborate around the project's boundary object, the MAZI toolkit. The outcome of these exercises will be documented and further refined in Deliverable 3.11 (self-reflection).

In general, the more we advance in the project, the clearer it becomes that the interdisciplinary framework, the evaluation of the pilots, and the self-reflection are all strongly connected and to some extent overlapping tasks. For this, it will for example happen that some material reported in one deliverable of the framework thread could also fit the evaluation or self-reflection thread. In this case we wouldn't repeat the same material in its "rightful" deliverable but take the opportunity to extend it and report on the progress made in the meantime. This will allow us to progress faster and perform more iterations on the most important tasks.

As a final remark, the interdisciplinary framework introduced in Deliverables 3.2 and 3.5, and refined here will be inevitably further improved as we progress with the development of the MAZI toolkit and real deployments in the pilot areas of interest. One of the main characteristics of interdisciplinary and transdisciplinary research is that it is highly context-specific (Hadorn et al, 2008; Frodeman et al, 2010), and thus the corresponding frameworks need to be flexible, in order to accommodate the evolution of the shared understanding of the common tasks and objectives, as well as the corresponding roles and characteristics of the different actors within MAZI.

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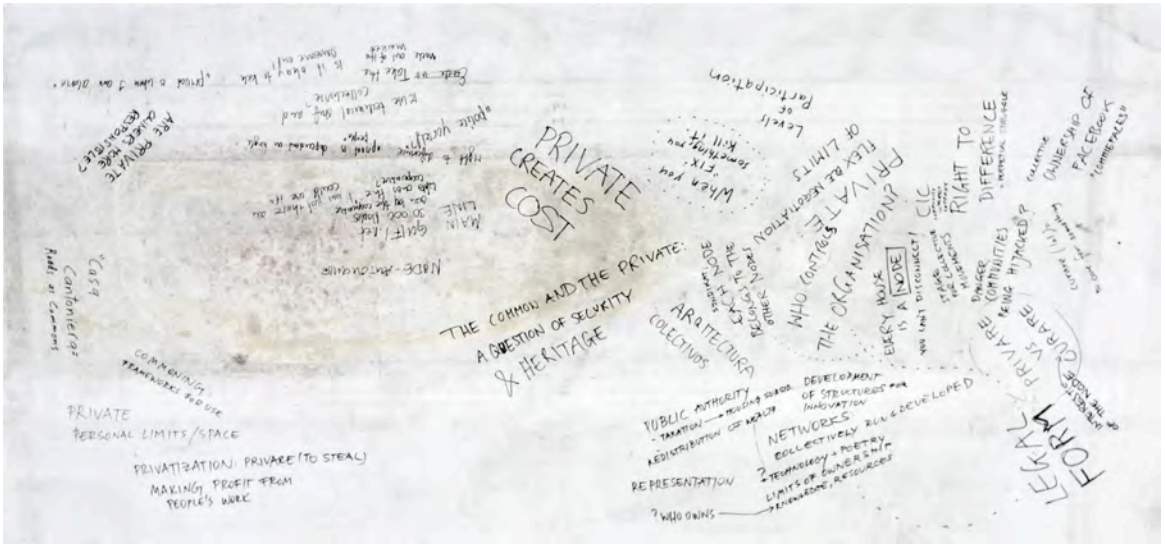
APPENDIX A - Berlin workshop

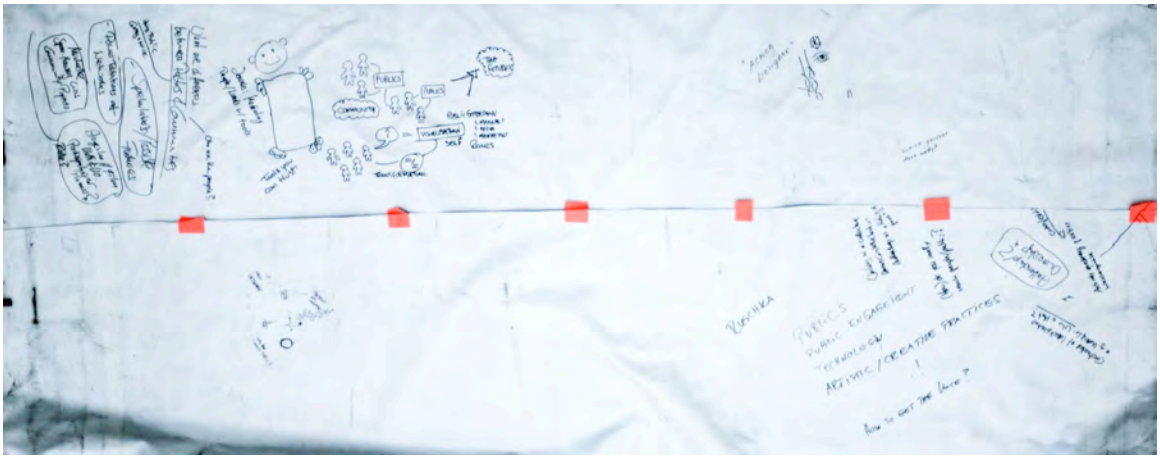
In this Appendix, we include additional descriptions to what is included in D2.1, which can shed some additional light to the various interactions that MAZI partners participated and help us reflect on additional lessons learned, detached from the "event action".

The day was divided into three blocks:

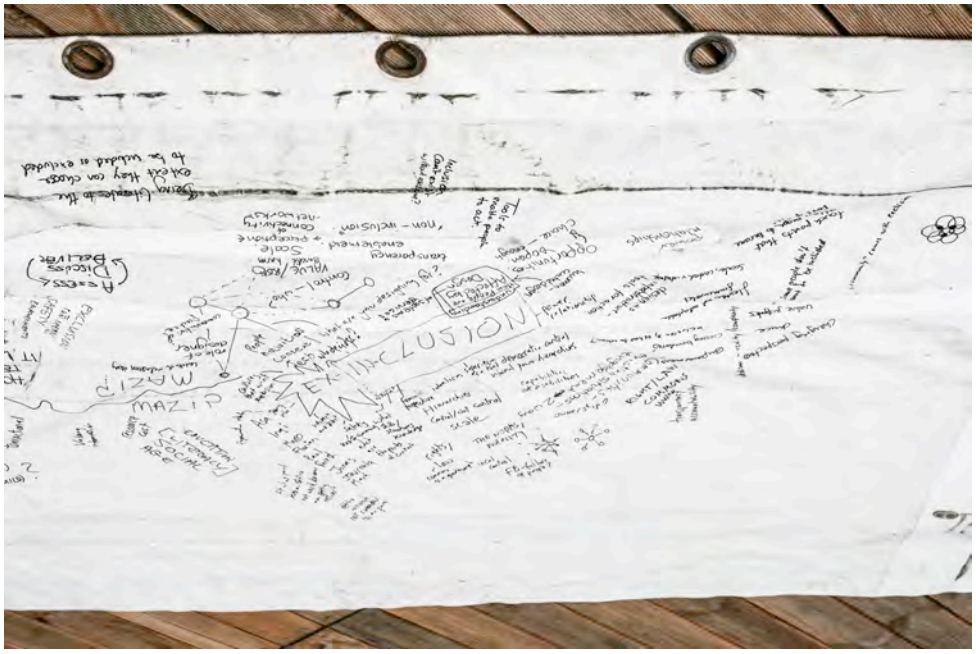
1. Semi-public working session in the form of three round tables regarding:
    a. **Ownership, Privatization and self-organization in urban and technological spaces**
    Topics discussed:
        i. Node autonomy: How are you responsible for a node in a common system? Is it ok to kick someone out (policing)? Right to difference …
        ii. Privare vs. curare (lat: to care): Private (personal limits, space) vs. Privatization (to steal, to make profit from someone else's work)
        iii. Commoning: How do we build frameworks for sharing?
        iv. In collectively ran & developed networks, who owns tech, resources, knowledge, dissemination, …
        v. Negotiation of limits & levels of participation
        vi. Private/Common: A question of Security & Heritage



    b. Publics, Creative Practice and Technology
    Questions discussed:
        i. Authorship/Ownership: How do we continuously question our roles productively?
        ii. Authorship vs. "making a point" when working in collective structures
        iii. How do we reach publics, what do publics need to express their points?
        iv. Mediating people and needs through tools: What are tools you can trust?



c. **Inclusion, Exclusion, Enablement**
   Topics discussed:
   i. Power relationships: Role of the "designer"; who controls/owns systems? How do we make sure to have considered how "others" are affected by the design of the system?
   ii. Concepts of literacy: How much literacy is necessary in order to decide whether to be included or not?
   iii. Scales of control/Different levels of exclusion and inclusion: What are the different dimensions of stakeholders? How much does one want/need to be included?
   iv. How can the concept of the commons be adapted for digital/hybrid systems?
   v. How can we make sure to provide enough education/literacy for others to be involved?
   vi. "How do we tell a fish it lives in the water?"



Naturally, none of these questions could have been fully and satisfactory answered. But both the collection of issues worth noting and their discussion together with important stakeholders of the Berlin pilot context, was a highly valuable exercise for the pilot team as well as the project consortium at large: The grounding in the community's pragmatic realities is one of the core prerequisites to create DIY networking structures that will we adapted and used by those for whom they are designed for.

2. Three panel discussions with representatives of each of the round tables and an open audience:
   a. Digital Commons + Interdisciplinary Reflection

b. Civil Society and ITCs + Interdisciplinary Reflection
c. Empowerment, Literacy and Inclusion + Interdisciplinary Reflection

3. The presentation of the MAZI/Berlin prototype, its initial deployments for the first interviews, a public demonstration and a public discussion

***Figure 13**: A scene of the public presentation of MAZI as part of the event on July 15th 2016*

Having had the opportunity to confront a vast number of very diverse people with our ideas, concepts and processes, but also the prototypes concretely, we were able to draw a number of conclusions that will enable us to enter the next phase of development based on very valuable learnings and experiences. Examples include:

- Trust Building between communities and EU-partners:
  - MAZI as a project and its members as a consortium gained trust in the community and sceptical positions towards the project (institutional, big public money, dissemination of initiative's social and political capital) lost some distance.
  - Consortium members went from being abstract names to "real" people; relationships to actors within the Berlin community were established.
  - The audience's need to receive information/knowledge about technological aspects was not catered appropriately. This happened predominantly out of a biased view on visitors, as "not being interested" in technical details (wrongful dichotomy of "technologists" and "non-technologists").
- Presentation of the prototype to the public
  - The presentation of the prototype was well received and responded with interest to use it and/or collaborate and discuss in different contexts. For example, we received the invitation to present the project at the Metrozones Camp, an event most interesting for MAZI, as it is contextualized at the fringes of academia and urban activism in Germany.
  - The event brought upon interest of different networks and publicity channels. As an example, the national news channel SWR covered the event and conducted interviews over the course of two days in preparation of a story yet to be published.
  - The presentation furthermore connected different actors from relevant fields. Especially through the round-table format during the first part of the event, and positioned the NAk within the discussion about DIY Networks and Alternative Technology Development in Berlin and beyond.
- Test of the prototype
  - Considering the early stage in the project, the prototype functioned pleasingly well and was well-received. The recorder-application functioned flawlessly, as did the automatic upload function to

the archive. Some minor issues (e.g. upside-down display of images) were detected and will be worked on as a next step. The access to the archive-application through the Wi-Fi was rather troublesome for some inexperienced users and will present us with one of the biggest challenges for the future. We tested the tool on many different levels: The interview situation, the editing of contributions, the navigation within the interface, the interaction with the offline-network as such, etc. Thus, this first deployment provided us with a rich pool of knowledge to continue the further development.

APPENDIX B - MAZI at the INURA conference

Context

The annual INURA conference is a very special and intense event organized every year in a different city, and is divided in two parts.

First, the "city" part in which the local organizer, typically a group, tries to achieve a double objective

1. to introduce participants to the historic, socioeconomic, political, and planning situation of the city, including visits and discussions with local grassroots initiatives, and their struggles.
2. to promote the organisers' own local agenda, get exposure through the reputation of INURA organizing for example public events, mostly panel discussions, for which the context of the conference can have supporting and amplifying effects.

Following the city part of the annual conference, INURA members get away from the city to the retreat, usually organised in a remote location in the country to discuss what they learned during the city part, devise ways to contribute to the local causes, e.g., by drafting support letters or organizing specialized working groups, as well as to inform each other about the situation in their own cities, allowing for mutual learning, interesting comparisons and a more holistic understanding of urban issues and developments around the world.

The atmosphere is at the same time intense, since there are really many things to discuss in in just 2-3 days. Deciding on the schedule at the beginning of the retreat is a participatory process which is quite unique and often takes up to two or even more hours. Depending on the weather quite some time is spent outside in a relaxed ambience and often large circles for discussion are formed in the most unexpected places.

The fact that this experience, 7-9 days in total, takes place every year for the last 26 years has created a very strong community with lifetime friendships. For many "Inurians", the first people they contact when visiting a new city are local INURA members who very often offer accommodation and private field trips (the INURA web site offers the option to search for INURA members per city and many are contacted even without having met before).

This long-term process is very important, or better necessary, to create a sense of continuity and a common language, required for such a diverse group of people from such different geographic, cultural and professional backgrounds to make sense of what each other is really saying and to build the necessary trust.

INURA plays a key role in MAZI, since the Kraftwerk1 pilot is run by Philipp Klaus (INURA Zurich Institute), the network's committed secretary since 1998, and Panayotis Antoniadis & Ileana Apostol (NetHood), both INURA members since 2013 and members of the organizing committees of the Athens conference (2015) and the Bucharest conference (2016) respectively.

The INURA network is important for MAZI also because of its main principles and tactics for the "right to the city" that has many similarities between the role of DIY networking in enabling citizens to claim their "right to the Internet". The fact that the majority of the INURA network with its urban research and action communities is not very conscious about the similarities and possible synergies between these two domains of struggle, makes the story of MAZI a useful addition to the INURA research and action agenda.

At the same time, MAZI is also useful because, being a CAPS-project, it exemplifies a possible framework for bridging research and action in a more fair and productive way.

Despite INURA's strong conviction on supporting activist groups and including them in the network's processes and discussions, this has been proven very difficult in the case of its core element, the INURA conference. The reasons are mostly practical, since many activists that are not at the same employed researchers have difficulty traveling around the world. This remains a big challenge today, even if there are many measures taken to subsidize activists, through reduced registration fees, and a dedicated fund, the INURA conference fund.

In this year's conference in Bucharest, MAZI brought to Bucharest an interesting technology that can play a key role in the extension of the concept of the right to the city to the "right to the hybrid city". The idea was to introduce DIY networking technology as a very powerful tool for urban activism.

But it also brought with it an extended group of non-academic activists, both regular INURA members and newcomers, some of them part of MAZIs' consortium, and others as invited speakers for the two scheduled workshops.

In the following, we summarize some important moments during this significant "contact" between MAZI and the INURA network, which provide very useful insights on the design and presentation of the MAZI toolkit and helped the envisioned cross-fertilization process between pilots.

At this stage, the description is rather detailed and "raw" in an effort to avoid losing information that could prove valuable later, as we advance with our interdisciplinary framework and self-reflection exercise. Some of these experiences will also form the basis for the toolkit guidelines to be included in Deliverable 1.2.

MAZI workshop, Bucharest

Before the official start of the INURA conference city part, MAZI organized a workshop to introduce to the INURA network the project objectives and methodology, but also the activists that managed to join the conference through the support of MAZI. All together around 35 persons attended the workshop, 7 from the MAZI consortium.

The format was very simple:

An introduction to MAZI and the three of its pilots with presentations from the activist groups, common grounds, INURA Zurich Institute, and unMonastery. (James Stevens presented the Deptford pilot at the second MAZI workshop during the INURA retreat).

The workshop started with a collective lunch [figure] and we were happy to welcome around 30 people, a good mix of old members and newcomers. The introduction to the project took place at the restaurant since many people arrived late and we wanted to save time.

A first demo of MAZI zone

Panayotis decided to introduce the project the way INURA people appreciate the most: through action. He had already set-up his Raspberry Pi in "dual mode", offering both local services and access to the internet through his smartphone, in hotspot mode.

It was a "friendly" dual mode in the sense that there was no redirection and people could visit the MAZI zone by typing on their browsers: http://mazi.zone. The first people that arrived at the restaurant were very happy to use Panayotis' Internet connection and many people did visit the local services and were asking questions on the functionality. The first bug of one of the toolkit's applications quickly appeared: When owncloud was used with an iphone all uploaded photos were named as "image.jpg" and in some small phones people couldn't see the button "Continue" in the window asking to replace or not the existing photos with the same name ... and so they got stuck.

But more people started arriving, all from the airport without having figured out how to connect online in Romania. Panayotis was very confident that MAZI will make a great first impression providing a MAZI zone that really makes sense.

Figure 14: *The audience during the introduction to MAZI at the restaurant*

The first critical question was quickly raised: do you try to sell us something? It looks beautiful.

Panayotis answered that he also likes the Raspberry Pi, but unlike other commercial products it is an open platform and not a closed technology. He wants to "sell it" but not for his own profit, for the common good.

In the meantime those that arrived finished lunch and tried to connect. "It doesn't work!" someone shouted. Of course, Deliverable 1.1 makes clear that there is a limit of concurrent users that connect to a Raspberry Pi, but after Panayotis had increased their expectations people seemed a little underwhelmed, always with a playful attitude and the always critical but trustful INURA's way of being together. A technical person in the group approached Panayotis to say that the problem was from DCHP and he could enter if he fixed an IP address, but it was too late. We then moved to the workshop's venue which was packed since some additional people joined in the meantime.

Introducing MAZI to the INURA people

The MAZI pilots were presented by Philipp Klaus (Kraftwerk1), Anna & Andreas (Neighbourhood academy), and Jeff & Lauren (unMonastery). Panos presented shortly the Creeknet pilot excusing James Stevens who was organizing at the same time a big festival in Deptford.

Figure 15: *Philipp Klaus presenring the Kraftwerk1 pilot study during the MAZI workshop*

It was the first time that the MAZI pilots were presented together in such a diverse audience. Here is important to note that, because of its long history of common action, the INURA network exhibits remarkable solidarity, and the fact that Philipp Klaus was in our group was enough for everyone to listen very carefully. It is very difficult to find an audience so truly engaged and at the same "non-expert", so critical and at the same time full of solidarity and trust.

Interesting questions that were raised during the pilot presentation included:

- The difficulties of knowledge transfer (e.g., for the Kraftwerk1 case study) between different social, cultural, and political environments, a topic that is raised repeatedly in INURA conferences, and common comparative projects of INURA members such as the New Metropolitan Mainstream project (http://www.inura.org/v2/index.php/activities/nmm-project/),
- How the knowledge brought by outsiders, like the unmonastery group, can stay in the community when the activists leave.
- In what ways the attachment (literally) of digital information to a physical space, such as the Prinzessinnengarten in Berlin, can facilitate knowledge sharing?
- Whether ICT technology is enough to engage people in common political action.

All very important questions that we will try to address in the course of the project. Before moving to the next part of the workshop, and listen to what our guest activists had to say about the last question, we took the opportunity to explain a little more the different prototypes that we brought with us, now displayed in the middle of the room. All in all four Raspberry Pis and UdK's Hybrid Letterbox, each hosting a different MAZI Zone.

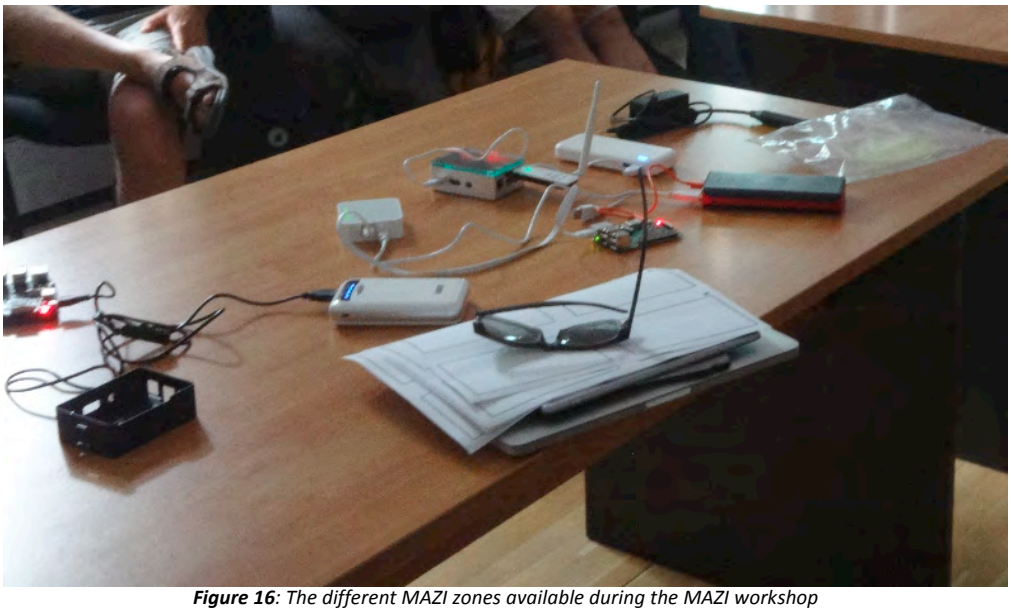


***Figure 16**: The different MAZI zones available during the MAZI workshop*

MAZI guests: different forms of urban activism

The second part of the workshop was devoted to presentation of our distinguished guests, activists all over Europe, all with a different approach and with different potential needs that technology and especially the MAZI toolkit could help to address or on the other hand, different tactics and methodologies for engaging citizens, approaching media, etc, from which MAZI can receive inspiration.

Iva Cukic & Ksenja Radovanovic represented the urban activist group "Ministry of Space" based in Belgrade, the organizer of the INURA conference 2014, one of the success stories of the presence of the INURA network in a city. More specifically, INURA provided a very effective context. It also offered credibility for the Ministry of Space to organize a public conference and to inform citizens about the forthcoming mega-project "Belgrade on the Water", for which there was no public consultation until then, followed by an "open letter to the people of belgrade", https://euroalter.com/2014/open-letter-to-the-people-of-belgrade, that has been shared widely and has helped the ministry of space to gain more and more followers for building a widespread urban

movement, Ne Da(vi)mo Beograd (Don't Let Belgrade D(r)own), https://nedavimobeograd.wordpress.com/. It has managed repeatedly to bring tens of thousands of people in the street to take part in organized playful urban actions, and coordinate the citizens of Belgrade in demanding transparency, legality, and participation in such important decisions that will affect severely the future of the city. https://www.theguardian.com/cities/2015/dec/10/belgrade-waterfront-gulf-petrodollars-exclusive-waterside-development. In their talk, Iva & Ksenja gave an update on the recent developments since the last INURA conference in Athens 2015 and showed us a short video of the latest demonstration with over 20'000 participants: "Who's city? Our city!" https://www.youtube.com/watch?v=xbhcvqSFxjk. The type of activism that Ministry of Space has excelled in, is about bringing collective awareness on what is happening behind the scenes, against the interests of citizens, and mobilizing them in claiming their "right to the city". For this, a large part of the underlying work is about communication and it is not a coincidence that an activist of the Ministry of Space group was arrested for handing out flyers with information about the Belgrade on Water project.

***Figure 17**: A panoramic view of the audience at the MAZI workshop*

As an example on how MAZI toolkit could support communication in a movement, Panos drew the attention of the workshop participants to one of the MAZI zones with a more playful one that announced a "ministry_of_space_free_Internet", SSID, promising free access to the Internet but in reality directed the connected users to a captive portal describing the goals of the Ne Da(vi)mo Beograd movements. Iva and Ksenja liked the idea but didn't feel comfortable with the technology. (One month later Panayotis was visiting Belgrade to show them how to use a MAZI Zone to inform citizens about their campaigns)

The next activist to present his experiences was **Tomislav Tomasevic**, who has a diverse profile including both informal and formal forms of activism. In his talk he focused on the informal urban struggles for transparent and democratic processes he was involved in in the city of Zagreb, and elsewhere in Croatia, which were similar in spirit, both playful and effective, with those led by the Ministry of Space. For example, peaceful sitting blockades to prevent demolitions, symbolic urban interventions, coordinating hundreds of people to continuously walk through a pedestrian passage to block officials to reach a venue where predefined decisions would be taken against the will of the citizens. Tomislav focused more on technology and explained in what ways he would imagine that MAZI could support this type of urban activism.

It was interesting to learn that one of the most pressing needs for such action is private communication between activists for coordination purposes, but also informing the public about "what is going on?", and "how can they help?". For the first need, the MAZI toolkit can not really help, at least not at this stage, since secure wireless communications are not easy to guarantee and coordination often requires long-distance communication for which a MAZI zone might not be the best option. But for the latter, as in the case of the Ministry of Space, a MAZI zone would be the ideal way to inform people on the background of an urban intervention, and ways to contribute to its cause.

Thomas Raoseta representing NeNa1 cooperative and 5im5i neighbourhood association from Zurich provided an example of a less direct, but equally powerful form of activism: the creation of credible alternatives for living and working together, but also eating together as he stressed. He explained the realistic utopia that NeNa1 wants to build inspired by previous "young" cooperative housing projects like Kraftwerk1, Kalkbreite, and more, and how it advances toward its realization step by step, through its monthly gatherings (see also http://o500.org/pechakucha.html). He also explained the plan of NeNa1 to build a new cooperative housing complex in a central neighbourhood in Zurich and create links with four existing neighbourhoods in the area, Zurich's district 5. From these 5 neighbourhoods in district 5 comes the name of the neighbourhood association 5im5i against gentrification, which as he explained is not about rich people being mean or about square meters per person but about more people living in the neighbourhood.

Constantina Theodorou followed to introduce the collaboration of MAZI with her activist group in Athens, recently called Co-Hab <http://cohabathens.com/>, giving also an overview of different actions in the city of Athens, like squats, of an abandoned cafe to a self-organized space for hosting artistic and political events. She explained how her group was fighted more by people from the somehow "same side" who found their project not "radical enough", demonstrating the difficulty for making compromises in order to achieve a common goal. This will be a challenge in the knowledge transfer between the cooperative housing projects in Zurich and Athens, and Contantina invited everyone to join at the Greek Pavillion of the Venice Architecture Biennale where this collaboration was officially initiated a few months afterwards.http://thisisaco-op.gr/en/events-press/events/34-co-housing-practices-inventing-prototypes-for-athens-26-28-30-october-venice.html

Vesna Tomse, coming also from Zurich, an INURA member, presented her work on informal and temporary use spaces, cooperative housing projects like Kalkbreite, local mobilization for the right to the city, and ended up with her most recent project, a temporary space, a garden similar to Prinzessinnengarten in Berlin, situated in the periphery of the city, called Wunderkammer. The name refers to the "cabinet of curiosities" of the 15th century, and the project aims to bring together forward-looking science and arts, interacting and complementing with each other, from compost toilets with solid waste transformed to coal at the pyrolyse station, to light installations and art sculptures, and why not, MAZI zones, with antennas mounted on the trees. Vesna mentioned more needs in terms of communication and expressed the desire to replace dominant platforms like google docs and google maps with etherpad and Open Street Map, replace social media with a local community networking, even accounting, archives and more. Panayotis commented that DIY networking cannot do miracles and we cannot really replace the Internet with it. But many of Vesna's aspirations about how MAZI could help her innovative project are credible and MAZI will surely have a presence in the Wunderkammer in the coming months.

The perspective of alternative media was represented in the MAZI workshop by **Gintarė Matulaitytė**, an editor with the Locomotive Press in Vilnius, Lithuania, http://www.locomotive.press/. Gintarė presented her journalistic work that started at "Echo Gone Wrong" and currently at "Locomotive Press", which is not only a new platform for critical and creative voices, but also something qualitatively new in the Lithuanian context. It offers a stage for the voices that are not heard in the mainstream media to manifest in various ways, and thus becomes a necessary complementary form of press in a democratic society. She gave examples of publishing along within related narratives of hand sketches, which represent scenes at a Vilnius District Court hearing in defence of a cause of public interest. By revealing what is not represented today in the mainstream media, the journalists intend, on the one hand, to affirm the societal diversity, including small or marginalized initiatives, actions and cultures. On the other hand, they want to exercise their citizen right to express publicly a multitude of views, which will have an expected positive effect against the homogenization of information and communication that societies face today.

Brett Scott brought another different perspective on activism presenting his work on deconstructing the complex world of finance, when he worked in a hedge fund to understand better the people that are behind these institutions and bring to light some of the hidden aspects of this industry pointing to a different form of activism: this of creating transparency, educating the public on "how things work", and drawing the attention to important developments, such as the "war on cash". In this sense, Brett is not the type of activist whose work can be supported by a technology like the MAZI toolkit, but he can contribute in making such technologies better understood by the wider public, as he did in the past for the case of finance, alternative currencies, and blockchain technologies.

The discussion inspired one of the INURA members, **Orhan Esse**, who asked to give also a presentation of a very interesting project imagining the city of Istanbul as an "open museum" and it could be indeed MAZI Zones that add a "digital layer" to the different "exhibits" spread all over the city.

It was an intense and long afternoon with a lot of "food for thought" and thus we decided to go earlier to the dinner venue and discuss there in smaller groups. However, more Inurians started to arrive and it was very difficult to control the enthusiasm of seeing old friends and catching up with happenings in cities all over the world, so we decided to postpone the wrapping-up of the workshop for the INURA retreat, when the rest of the MAZI crew will have also joined. Everyone was very happy and people thanked us for our flexibility.

As a final remark, the reason we describe in detail all these contributions is that they provide a very diverse view on the tactics and needs of urban activism, which provides inspiration for the development of the MAZI toolkit but also acts as a sort of triangulator for facilitating cross-fertilization between pilots.

***Figure 18**: The INURA Public Panel, "Cooperation for better urban policies", on bridging grassroots calls for action with policy making and governance with Giovanni Allegretti, Irina Zamfirescu, Louanne Tranchell, Marco Clausen, Oana Preda, Richard Wolff, Sorin Cucerai, Tomislav Tomasevic, and moderated by Ileana Apostol (NetHood)*

After a very intense city conference, including a very success public panel on "Cooperation for better urban policies" moderated by Ileana Apostol (see Figure 5), the INURA group arrived at Sibiel for the so-called "retreat", after a short visit at the close by city of Sibiu, where we had the traditional round of impressions from the city part (see Figure 12), at the courtyard of the Sibiu's Romanian Chamber of Architects (OAR) and, close by took, a group photo featuring many MAZI partners and guests.

***Figure 19:** The INURA group during the retreat*

MAZI presentation at the retreat plenary

The retreat was equally intense and we were lucky to be able to reserve a slot in one of the outdoor plenary sessions, since it is always difficult to have all the voices heard at the INURA plenary sessions, a reasons why the agenda setting session at the beginning takes often very long time.

Figure 20: *MAZI plenary presentation at the INURA retreat*

For this, we had a very short time to present, 15min, and we chose to give a few minutes to every MAZI partner to say a few words about their motivation and role to be part of the project. A short discussion on the difficulties to combine research and action in the context of a EU funded project, but also the importance to take the challenge followed.

Marco mentioned that in such projects sometimes academics “appropriate” the work of the activists, which raised an interesting discussion afterwards with Andreas from UdK and whether there is evidence of this phenomenon in the case of MAZI (see also the description of this “tension” below)

A little later Philipp presented also in more detail the **INURA coop initiative,** which aims at bringing together experiences on cooperative housing and other forms of cooperatives from as many cities as possible. There are cities and INURA members with a rich experience in setting up and being part of experimental and functioning cooperatives. The INURA coop initiative enhances knowledge transfer on all levels of organisation and realisation of cooperative building, construction and social life as to stabilise structure in volatile or rundown real estate markets.

During the conference I was carrying the "friendly" version with me, and many people were connecting and approaching me for questions. And sometimes I was also approaching interested people to show them how they can use the available local applications step by step. This was a very encouraging experience because in such intimate situations everything worked very well and people liked it a lot.

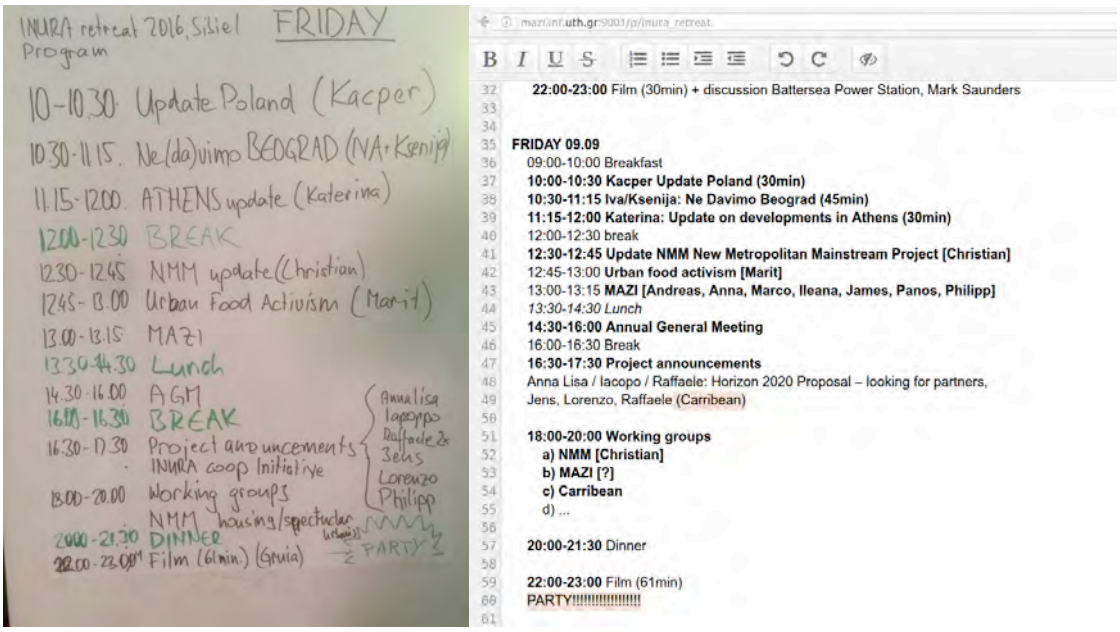


Figure 21*: The handwritten schedule of the INURA retreat programme (left) transcribed from the etherpad version (right), used to facilitate the negotiations during the plenary session*

The most popular local app was owncloud, and many uploaded their photos, especially in the bus during the return to Bucharest (an "ideal" situation in which one can take advantage to engage people, especially if he/she has access to the bus audio system :-)).

Etherpad was very much appreciated as a conference organizing and synchronizing tool. Its use to set up the retreat programme was very successful. It turned out to be a powerful tool in supporting substantially the participatory process of programming. Subsequently, it became the main organizational tool of the whole conference (people commented on how easy it was to set-up the agenda in a bottom-up self-organized fashion compared to previous years).

Conclusion for MAZI: However, this meant that people had already bookmarked the “online” version and did not use much the “offline” one. A good lesson from this experience is that it would be great in future versions of the MAZI toolkit to enable some sort of synchronization between online and local instances of the same applications to allow people to use the online one when really needed and avoid losing information when not in contact with the offline MAZI zone.

***Figure 22**: A session of multiple small working groups, ideal to engage people in using the MAZI Zone placed in the middle.*

MAZI parallel workshop

The same afternoon we would have the chance to explain in more detail the MAZI toolkit in a parallel 2hour workshop. It was not a surprise that after a 30min tutorial on DIY networking by Panayotis, James, and Andreas, including demos of the different MAZI zones, the hybrid letterbox, and a mini radio transmitter brought by James as a possible addition to a MAZI Zone, the discussion evolved around the key question “Why?”. Who would be interested to use a local DIY network and to serve which need? Why is this difficult and what can we do?

Some of the old timers like Louanne, a 80-year old community activist and urban planner, had a hard time understanding the reasons for adding yet another “gadget” like a Raspberry Pi in their daily lives. Others were enthusiastic about the opportunities that this technology might bring to their own contexts and started proposing new ideas of how it could be used, raising important challenges and strategies that could help us to achieve our objectives. We summarize them below, trying to preserve the language used. Note that many of these ideas are already included in the MAZI documentation but it is interesting to listen to similar ideas described from different perspectives. It was also rewarding to see that some of the people kept in their mind the ideas presented in the MAZI workshop and thought over them.

Why DIY networking?

- Co-Presence or de facto physical proximity: interacting online with others at a specific local spot, knowing that all other "users" are also close by (since access is limited by the coverage area of the wireless access point).
- An attribute of a place, a sort of augmented reality, enhancing the experience of being present in a certain place, something more is happening here
- Tool for group communication, like in blocks of apartments between residents, a sophisticated announcement board and more.
- Offers means to create non-commercial places for gatherings in the city and inform people about both the existence of such places and activities happening at a specific moment. Also playful interactions, games.
- Leave a message in the garden, to be collected later (would allow less intrusive communication and the pressure to "reply" created by various online platforms)
- Push notifications through beacons, e.g., about contested spaces providing awareness, a gateway to important issues (as the example of Ministry of Space discussed in the workshop), but also for informing about interesting places close by, check-in/check-out to know "who is around" in co-living groups (concerns raised for the "pushing" dimensions for various many reasons, see below)
- Public transport: trains, buses (Deutsche Bahn introduced recently a "matching" service in its trains)
- Security, privacy, against censorship, surveillance, etc. How useful could this technology really be for organizing urban actions like the ones presented in the MAZI workshop? Interesting discussion about anonymity. The eavesdropper can also stay anonymous, but in the Internet it is the same (and you don't even have the chance to know "who is there", while with offline networks it is easier somehow). Andreas Unteidig mentioned exactly that with UdK's "meeting point" installation in Israel, there was the problem of unqualified people joining the conversation and this would intimidate people being afraid fear of getting hate speech
- Useful in case of disasters, earthquakes. We need "back-up" solutions. Like candles for electricity ...
- Collectively produced, a collective process, discussing, building it up together (like the Prinzessinnengarten up), it is attractive even with its problems because it was collaboratively produced. It is the same with some chairs in the garden that are not comfortable, but people like them because they build them themselves.

Challenges

- Alienation: there was a long discussion about the concept of listening to audio in a public space, like the Berlin pilot's interview tool, and the fact that this could cause "alienation". DIY networking offers many alternative options, e.g., to make the audio available certain periods of the day, to make it more communal through radio transmission, to use it to promote playful interactions (e.g., "go to plot 7", or "find a person with a red t-shirt and say hi")
- Links to gamification (like pokemon), addiction, automation. Can we really keep its use more "subtle" or all the bad patterns of use will reappear? This is a real danger, but there are a few characteristics of DIY networking that make it conceivable that could be used to increase face-to-face contact instead of replacing it, such as: it does not need special funding to be maintained and thus need not to be driven by commercial motives, which means that does not have to "maximize" online activity. It could very well shut-down during the night.
- The tragedy of the beacons? In addition to the interesting ideas presented, many people raised the issue of privacy, bringing examples like GPS watches used by parents to track their children. A key difference with similar intrusive application is that DIY networking but most importantly allows local ownership of the corresponding data. So, even if everyone in the room would be against such intrusive uses of this feature, it still a choice for some people and with DIY networking they could do it without losing their data "sovereignty". Also, one could think of "push notification" in a less aggressive way, like a well chosen SSID, a poster, etc.)
- Technology can be misused but also appropriated … we do the branding, we think our positive scenarios and then apple/microsoft do the same thing better but removing all the positive aspects, and we get locked in again.

In terms of "strategy", Brett Scott proposed to pitch it as an education project and engage local young people. It is much more attractive to get engaged in such a project if the network is created by the local youth. And as

James added, such projects can also replicated at no cost and good ideas can travel fast (which of course works for bad ideas as well).

As a final remark, Panos mentioned that it is always very interesting to talk about DIY networking and always new ideas appear and it helps people to imagine ways to live together and communicate in localities which are valid even without the technology itself.

Research vs. activism

(plenary session moderated by Marco Clausen)

The last MAZI's intervention in the Bucharest INURA conference was a slot moderated by Marco Clausen who asked a short slot to discuss about the often problematic relationship between research and activists, a topic that is always raised in INURA conferences from different angles. We had already a similar discussion during the "impressions" round in which some people felt that one of the guided tours was more like "poverty tourism". This triggered a lively debate about the organization of field trips during the city (even whether they are needed in the first place) with the main counter-argument that such field trips are often very useful for the activists themselves as well.

Marco brought his own perspective, with a very concrete example, and a provocative question: "What should I do when an academic researcher asks me to give an interview?" As he explained, their project was the subject of numerous demands for interviews and they have spent many hours with researchers but the outcome of the research is opaque to them: 500 pages of a PhD, no-one has the time to read. "This is not dissemination" he added and wandered even more provocatively "In INURA, we have a Zurich professor with and an activist without salary. Are there mutual benefits from this network?"

Many hands were raised and a heated discussion started. People gave examples of cases where activists did receive visibility for their cause through collaborating with researchers as the Architecture Auto-Geree Garden in France.

Anna added that this is right and they are now experimenting with demanding explicitly from researchers to give something to us, practical ways to get something back from the executed research.

Thomas Raoseta stressed that there are times when a person is an activist, and there are times when the same person is a researcher. For such people time is crucial. Thomas is looking for situations in which things come together and works only on projects that are aligned with his theories and beliefs.

Christian Schmid noted that it is important that Marco raised the question but this way is oversimplifying the discussion. As he said, there are many ways of being an activist, and there are many ways of being a researcher. There are activists, as himself, who became scientists and joined the academia - where you have resources, time to reflect, etc. Many PhD students will not be part of the academia afterwards, but they could very well give their contribution to some changes. Academia is an industry with constraints, and of course we should change some of that but at the same time the system has a lot of instruments to block these scientific contributions that create awareness on urban movements and their importance, and we have to challenge them. We have great scholars who gave great support to the movements.

Marit Rosol agreed that there can be a mutual benefit and a lot of academics can be used as a resource, and especially if they teach critically, it is an important contribution. it's a continuum ...

Someone said that the share of the profit out of this relationship is still very unbalanced and academics do not give back as much as they should to those that are the main source of their work. Over ten hands were raised, and Philipp decided to respect the timing and stop the session. Panos asked to say only two words before everyone goes out: "INURA FUND!"

https://inura16.wordpress.com/registration/inura-fund/

In the bus

In the bus to the airport from Sibiel a great opportunity appeared to demonstrate very clearly the usefulness of the MAZI zone. The bus WiFi was not working well and Panos took the opportunity to activate the MAZI Zone. He set as default service the owncloud application, and this time was more careful. He went patiently from

person to person asking them if they have taken photos and if they would like to upload them on the Raspberry Pi for them to be easily shared.

This time everything worked perfectly and 6 people uploaded their photos on the local MAZI zone which was then "synchronized" with the online owncloud repository for sharing INURA material. Panos had included also a folder with a selection of 500 photos from the 25 previous INURA conferences and many people enjoyed browsing through them while waiting impatiently to arrive at the airport.

Post-event reporting

James Stevens also reported on his first INURA conference on the SPC blog, http://wrd.spc.org/well-conversed/. Among others he comments that "we tested out a 'standalone' Mazi Playground prototype, encouraging upload of images, recordings and texts to the OwnCloud and EtherPad services it offers as well as mobile broadband tethered through it to Panos smart-phone!" [...] Very intense program of talks, project presentations with some workshops but mostly together. With so many MAZI folk at the event [Marco - Prinzessinnengarten, Anna - Common Ground, Andreas, Panos and Ileana, Philipp and YT makes 7.] there was much mazi discussion between scheduled talks though just a brief presentation by us all and then a 2 hour hands on workshop which was a barrage of questions but with fewer of the inurians present [...] On the Inurian bus Panos operated his portable Mazi Playground tethered to his mobile phone for most of the trip.. and continued to run it during the retreat. Many have used it to share images -presentations and notes.. not sure what happens next. lets ask him!"